PROCEEDINGS

OF THE

MADRAS GOVERNMENT

IN THE

PUBLIC WORKS DEPARTMENT,

FOR THE

MONTH OF MAY

1862.

PRINTED BY AUTHORITY.

MADRAS:

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1862.

PUBLIC WORKS DEPARTMENT.

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168	Letter from the Chief Engr., regarding the impracticability of removing to Madras the Machinery at Beitkal for some months more, forwarded to Bombay Govt., who were requested in the meantime to take care of them.	7th May No. 975.	....	Do.	1074
169 & 170	Endorsement of Dy. Chief Engr., Central Circle, submitting letter from Lt.-Col. G. W. Walker, stating that he was relieved from duty with Bombay Govt. on the 17th April 1862, recorded.	7th May No. 976.	....	22nd Feb. 1862, Nos. 364, 365.	Ibid
171 & 172	Procs. Rev. Dept., on the subject of clearing a trace between Mahindragiri Range of Hills and the high lands of Sourah's country, &c., communicated to Dy. Chief Engr., Northern Circle.	7th May No. 977.	....	1st April 1862, Nos. 17, 18.	1075
173 & 174	A standing advance of Rs. 10,000 sanctioned to be placed at the disposal of the Agent to the Irrigation and Canal Company for the provision of materials and labor on account of manufacture of Stores in the Central Workshop at Kurnool.	7th May No. 978.	....	12th April 1862, Nos. 239, 240.	Ibid

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		1862.			
175	Endorsement of the Govt. of India, sanctioning the bill for constructing a lock and calingulah for the Coringa channel in the Godavery Dist., communicated to the Officer in charge of the Audit and Account Depts.	7th May No. 979.	....	28th Jan. 1860, Nos. 133, 134.	1076
176 & 177	Estimate for constructing a first class Dist. road across the Maduckseerah Táluq in Bellary, sanctioned, and the Dy. Chief Engr., Central Circle, called upon for certain information in connection with the same.	7th May No. 980.	....	None.	1076 & 1077
178 & 179	Letter from the Officer in charge of the Govt. Central Museum, requesting orders for the repair and improvement of certain Cages of Tigers and Cheeta, communicated to Dy. Chief Engr., Central Circle, with a request that the needful work may be done without any delay.	7th May No. 981.	....	20th Jan. 1862, Nos. 64, 65.	1077 & 1078
180—184	Mr. O'Hara's resignation declined to be accepted, and he is called upon to substantiate the charges brought by him against Captain Gahagan, Dist. Engr., Salem.	8th May No. 982.	....	17th Dec. 1861, Nos. 228, 229.	1078 & 1081
185 & 186	Letter from the Chief Engr., stating that the sum of Rs. 4,170 applied for on account of the Murthyaur under tunnel, &c., is not now required, and that the information called for in the Procs. dated 4th April 1862, No. 678, regarding the same, will be furnished by Dy. Chief Engr., Southern Circle, recorded.	8th May No. 983.	....	4th April 1862, Nos. 89—93.	1082
187 & 188	An estimate for excavating and tunnelling a channel in the Kistna Dist. to carry off the drainage water from a tract of land in the Gudewada Taluq, sanctioned.	8th May No. 984.	....	None.	1082
189 & 190	Procs. Pub. Dept., enclosing Home Despatch, sanctioning the proposal for making provision in the Pub. Works Budget for the necessary outlay on account of the Peoples' Park, communicated to Dy. Chief Engr., Central Circle.	8th May No. 985.	....	1st April 1862, Nos. 5, 6.	1083
191 & 192	An additional sum of 200 Rs. for the completion of the Gram Godown at the Remount Depôt near Oossoor in the Salem Dist., sanctioned.	8th May No. 986.	....	1st May 1862, Nos. 29, 30.	Ibid
193 & 194	Home Despatch, regarding Ponany and Chetwye Canal, communicated to Dy. Chief Engr., Southern Circle, with a request to hasten the submission of the Project regarding the same.	8th May No. 987.	....	31st Dec. 1861, Nos. 505, 506. Letter to England, dated 31st Dec. 1861, No. 85.	1084

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.	1862.		
195 & 196	Scale proposed by Chief Engr. in supercession of the periods of service required by the notification of 2nd March 1860 for promotion of the members of the Upper Subordinate establishment of the Pub. Works Dept., sanctioned.	8th May No. 988.	....	31st Dec. 1861, Nos. 578—581.	1084 & 1085
197—199	Letter from the Govt. Supt. and Controller Madras Pier Works, forwarding copy of a Certificate furnished by him to the Contractor's Agent on account of the last section of the Madras Pier, recorded.	8th May No. 989.	....	31st May 1861, Nos. 277—280. 21st June 1861, Nos. 250, 251. 6th March 1862, Nos. 65—67.	1086
200 & 201	Procs. Milty. Dept., on the letter from the Quarter Master Genl. of the Army stating that no new Cells are required at Poonamallee and that all new works at the Depôt at Arcot should be stopped, communicated to Dy. Chief Engr., Central Circle.	8th May No. 990.	....	30th Oct. 1860, Nos. 391, 392.	1087
202 & 203	Dy. Chief Engr., Central Circle, referred to Procs. No. 982, dated 7th May 1862, and orders declined to be passed on Mr. O'Hara's application for the withdrawal of his resignation until the information called for in the above Procs. is supplied.	8th May No. 991.	....	7th May 1862, Nos. 180—184.	Ibid
204 & 205	Letter from the Govt. Supt. and Controller Madras Pier Works, on the question of laying down moorings, &c., around the Madras Pier, ordered to be referred for settlement to Home authorities.	8th May No. 992.	9th May No. 30.	6th March 1862, Nos. 68, 69.	1088
206—208	Grant of Rs. 9,000 for putting in order the road from Tindevanum to Mercanum and repairing the branch lines, sanctioned, and letter from the Dist. Engr. South Arcot, regarding the state of the Salt Pan roads, referred to Rev. Dept.	8th May No. 993.	....	7th May 1860, Nos. 110, 111. 14th Feb. 1862, Nos. 227, 228. 19th Feb. 1862, Nos. 319, 320. 31st March 1862, Nos. 589, 590.	1089 & 1090
209 & 210	Telegram from the Govt. of India, stating that Madras Budget has been relieved to the extent of about two and three quarter lacs owing to the transfer of Canara, communicated to Chief Engr.	8th May No. 994.	....	31st Dec. 1861, Nos. 596—598.	1091
211 & 212	A map and statement of roads within the limits of the Northern and Central Circles, forwarded to Chief Engr. and the statements due from Central and Southern Circles required to be made over to the said Officer for the purpose of preparing a general one for the entire Presidency.	8th May No. 995.	....	18th March 1862, Nos. 281, 282.	1092

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
213 & 214	Procs. Pub. Dept., calling for report as to what has been done with reference to the orders of Govt. sanctioning the construction at Calicut of a Small Pox and Leper Hospital and the cause of the delay in the erection of the same, communicated to Dy. Chief Engr., Southern Circle.	1862. 9th May No. 996.	....	14th Jan. 1859, Nos. 54, 55. 9th May 1859, Nos. 99, 100. 25th May 1859, Nos. 107, 108. 26th Sept. 1859, Nos. 47, 48.	1092
215 & 216	Expenditure of Rs. 50 for the experiment in regard to prickly pear, sanctioned to be incurred at Arcot, and Dy. Chief Engr., Central Circle, requested to report what should be done for the eradication of prickly pear at Palaveram.	9th May No. 997.	....	28th Feb. 1862, Nos. 446, 447.	1092 & 1093
217 & 218	Estimate for improving the Port of Ganjam, declined to be sanctioned.	9th May No. 998.	....	31st Dec. 1861, Nos. 467, 468.	1093 & 1094
219 & 220	Home Despatch reviewing the Pub. Works Report for 1860-61, with orders thereon.	9th May No. 999.	....	19th Oct. 1861, Nos. 229, 230. 28th Nov. 1861, Nos. 343, 344. 24th Dec. 1861, No. 366. Letter to England, dated 24th Dec. 1861, No. 83. 25th March 1862, Nos. 467, 468.	1095
221 & 222	Grant of a gratuity of 57 Rs. to Thimmen, late a Pecottah man at the Seven Wells Madras, authorized.	9th May No. 1,000.	....	None.	1096
223 & 224	Estimate for two iron bridges in lieu of masonry bridges in the Godavery Dist., sanctioned.	9th May No. 1,001.	....	12th March 1862, Nos. 152, 153. 21st March 1862, Nos. 375, 376.	1097 & 1098
225 & 226	Procs. of the Dist. Engr. Malabar, regarding the keeping open of the Navigation in the Edittrooty Channel, approved.	9th May No. 1,002.	....	31st Dec. 1861, Nos. 505, 506. 8th March 1862, Nos. 193, 194.	1098 & 1099
227 & 228	Procs. Rev. Dept., forwarding letter from the Dist. Engr. Upper Godavery, stating that Salt Shed at Kunta is no longer required and may be sold to Messrs. Roghé & Co., communicated to Dy. Chief Engr., Northern Circle.	10th May No. 1,003.	....	5th May 1862. Nos. 89, 90, Rev. Dept.	1100
229 & 230	Estimate for re-constructing a portion of the Arch of Kavivedu bridge on the Trunk Road No. 6 in the Nellore Dist., sanctioned.	10th May No. 1,004.	....	31st March 1862, Nos. 601, 602.	Ibid
231 & 232	Letter from the Govt. of India, requiring that no steps shall be taken for the construction of temporary Barracks at Jaulnah, recorded.	10th May No. 1,005.	....	None.	Ibid

1 Index numbers of the Proceed-ings.	2 Subjects.	3 Dates of Proceed-ings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
233 & 234	Satisfaction of Govt, signified at the progress made in the construction of the Codumurty and Iyar bridges in the Trichinopoly Dist.	10th May No. 1,006.	....	9th April 1862, Nos. 180, 181.	1101
235 & 236	Procs. of the Dy. Chief Engr., Southern Circle, authorizing the Dist. Engr. Malabar to use bricks in lieu of laterite in the construction of the Alatoor Munsif's Court House, approved.	10th May No. 1,007.	....	21st June 1861, Nos. 242, 243.	Ibid
237 & 238	Promotion of Asst. Supervisor Bateman to the rank of Supervisor *vice* Dick deceased, authorized.	10th May No. 1,008.	....	None.	1102
239 & 240	Dy. Chief Engr. Southern Circle, required to furnish certain information regarding the work done in 1861-62 in connection with the conversion of the Infantry Place of Arms at Manantoddy into Offices for the Rev. Survey and Settlement Depts.	10th May No. 1,009.	....	19th July 1861, Nos. 254, 255.	1102 & 1103
241 & 242	Estimates for the construction of four escapes in the portion of the Ellore High Level Canal between Dowlaishwaram and Ellore, sanctioned, and the proposal to finish the works while the Canal is closed, approved.	10th May No. 1,010.	....	30th April 1862, Nos. 485, 486.	1103 & 1104
243 & 244	Entertainment of a temporary establishment on account of the Red Hills Tank water supply Project sanctioned, and the Acct. Genl. requested to place at the disposal of the Dist. Engr. Presidency, 20,000 Rs. from the allotment of one per cent. Income Tax.	10th May No. 1,011.	....	12th April 1862, Nos. 224, 225. 30th April 1862, Nos. 501, 502.	1104 & 1105
245 & 246	Entertainment of a temporary establishment on account of the Pombel Tank Project sanctioned, and the Acct. Genl. requested to place at the disposal of the Dist. Engr. Presidency 20,000 Rs. from the allotment of one per cent. Income Tax.	10th May No. 1,012.	....	18th Dec. 1861, Nos. 234, 235. 16th May 1862, Nos. 243, 244.	1105 & 1106
247 & 248	Letter from the Government of Bombay regarding Private Murray, communicated to Deputy Chief Engineer, Central Circle, with a request that arrangements may be made for his rejoining his Corps.	12th May No. 1,013.	....	5th October 1861, Nos. 53, 54.	1106 & 1107
249 & 250	Letter from the Officer Commanding Mysore Division, requesting for a further grant of Rupees 50,000 for the completion of the New Dragoon Barracks, communicated to Deputy Chief Engineer, Central Circle, for report.	12th May No. 1,014.	....	4th Jan. 1859, Nos. 52, 53. 4th March 1859, Nos. 35,—37. 26th March 1859, Nos. 78,—80. 14th June 1859, Nos. 41, 42.	1107 & 1108

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		1862.			
251 & 252	Deputy Chief Engineer, Central Circle, requested with certain observations to re-consider the provisions of estimate for raising the bund, &c., of the Yerramunchee Tank in the Pengondah Táluq of the Bellary Dist.	12th May No. 1,015.	....	None.	1108 & 1109
253 & 254	Proceedings Marine Department, sanctioning an estimate for erecting a look out place on the roof of the Custom House in connection with the present Signal House Madras, communicated to Deputy Chief Engineer, Central Circle.	12th May No. 1,016.	....	3rd May 1862, Nos. 3, 4, Marine Dept.	1109
255 & 256	Return of Bills passed in the Central Office for cleaning and setting up Machinery during the quarter ending 31st March 1862, recorded.	12th May No. 1,017.	....	8th June 1859, Nos. 132, 133. 8th Nov. 1860, Nos. 135, 136.	Ibid.
257 & 258	Certain land forming portion of Mr. Jones' property in Malabar District declared to be required for the road from Tambracherry Pass to Manantoddy, and the Collector of Malabar directed to take possession of the land and adjust claims for compensation under Act VI of 1857.	12th May No. 1,018.	....	19th July 1861, Nos. 258, 259.	1110
259 & 260	The sum of 5,000 Rupees contributed by the Zamíndár of Jeypore for the formation of the road to Jeypore, via., Golikondah, authorized to be repaid from the Reserve Fund of 1862-63.	12th May No. 1,019.	... .	19th Nov. 1851, Nos. 254, 255. 8th Feb. 1862, Nos. 116, 117. 24th April 1861, No. 369, 370.	Ibid.
261 & 262	Civil Paymaster authorized to pass Captain Payne's Bills for salary at the rate allowed to 1st Assistant District Engineer.	12th May No. 1,020.	....	2nd Sept. 1859, Nos. 109, 110. 20th Sept. 1859, Nos. 52, —54. 24th Feb. 1862, Nos. 380, 381.	1111
263 & 264	Letter from the Executive Engineer North Canara, reporting that A. F. Fraser, Assistant Engineer Sadashe-ghur Range, has been relieved of his duties and directed to go to Nellore, communicated to Chief Engineer and Deputy Chief Engineer Northern and Central Circles.	12th May No. 1,021.	....	20th Feb. 1862, Nos. 337, 338. 18th March 1862, Nos. 298—300.	Ibid.
265 & 266	Proceedings Revenue Department, requiring a report as to when the Custom House sanctioned for erection at Beypore is likely to be completed, referred to Deputy Engineer, Southern Circle, for early report.	12th May No. 1,022.	....	9th May 1862, Nos. 194, 195, Rev. Dept.	1112
267 & 268	Certain Bills submitted by the District Engineer Tanjore, sanctioned, and the Officer in charge of the Audit and Account Departments required to warn the District Engineer that work without authority and delay in the submission of Bills for work done and completed will be severely dealt with.	13th May No. 1,023.	....	None.	1112 & 1113

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		1862.			
269 & 270	Transfer to the Madras Railway Company of two of the movable Cranes supplied by the Contractor for the use of the Pier, sanctioned.	13th May No. 1,024.	....	6th March 1862, Nos. 65—67.	1114
271 & 272	Estimate for putting up movable screens in the Government House occupied by the Board of Revenue, sanctioned.	13th May No. 1,025.	....	29th Jan. 1862, Nos. 155, 156.	Ibid.
273 & 274	Three bills for repairing the banks of the Vettaur river, sanctioned, and modification of a former order sanctioning a charge for certain masonry cubes in a Bill for a Tunnel on the Road No. 36, between Negapatam and Tranquebar, ordered, as also displeasure of Government signified at the unsatisfactory manner in which the above Bills have been submitted by the Officer in charge of the Audit and Account Departments.	13th May No. 1,026.	....	24th Dec. 1861, Nos. 344, 345.	1115 & 1116
275 & 276	Letter from the Executive Engineer North Canara, reporting that he has relieved Corporal J. Banks of his duties there and directed him to proceed to Madras, communicated to Deputy Chief Engineer, Central Circle.	13th May No. 1,027.	....	18th March 1862, Nos. 298—300.	1117
277 & 278	Representation of the Inspector General Madras Police, of his inability to take charge of the buildings at Gooty without extra aid, referred with certain observations for consideration in the Judicial Department.	13th May No. 1,028.	....	6th Feb. 1862, Nos. 34, 35, Judicial Dept.	1118
279 & 280	Proceedings Military Department, approving of the estimate for effecting certain alterations and improvements to the Cook houses of the Parcherry in Fort Saint George, communicated to Deputy Chief Engineer, Central Circle.	13th May No. 1,029.	....	22nd Dec. 1859, Nos. 33, 34.	Ibid
281 & 282	Tabular Statement submitted by Deputy Chief Engineer, Central Circle, for two extra Accountants, to be forwarded to the Government of India, and the above Officer informed that in Tabular Statement for temporary establishment permanent establishment need not be shown.	13th May No. 1,030.	....	5th April 1862, Nos. 115, 116.	1119
282 A.	Government of India applied to for sanction to the entertainment of a temporary establishment to the District Engineer Madras.	13th May No. 1,030A.	....	Ditto.	1120 & 1121

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		1862.			
283& 284	Certain additional sums on account of works at Wallajah Baugh and Medical Stores in the Fort, sanctioned from the General Funds at the disposal of the District Engineer Presidency.	13th May No. 1,031.	....	19th Dec. 1861, Nos. 258, 259. 21st Dec. 1862, Nos. 282, 283. 26th March 1862, Nos. 491, 492.	1122
285& 286	Endorsement of Dy. Chief Engr., Northern Circle, reporting the result of certain charges brought by an Inspector of Police against Sub-Overseer Baupiah in the Ganjam District, recorded.	13th May No. 1,032.	....	31st Jan. 1862, Nos. 175, 176.	1122 & 1123
287 &288	Acct. Genl. requested to place Rupees 910 at the disposal of the Dist. Engr. Ganjam from the Reserve Fund of the current year for the construction of two Sub-Magistrates' Kacheris.	13th May No. 1,033.	....	25th April 1862, Nos. 387, 388.	1123
289 &290	Procs. Finl. Dept., requiring that in reports or in accounts in which local coin is mentioned the equivalent amount in the Govt. Rupee may be inserted in the margin, communicated to Chief Engr., &c.	13th May No. 1,034.	....	None.	1124
291 &292	Procs. Mily. Dept., on the letter of the Dy. Adjt. Genl. of the Army, stating that the services of Lieut. G. E. Fryer, 21st Regt. N. I., are available for employment in the Pub. Works, communicated to Chief Engr.	13th May No. 1,035.	....	29th April 1862, No. 465.	Ibid
293& 294	Estimate for metalling some of the worst portions of the road between Aska and Russelcondah, sanctioned.	14th May No. 1,036.	....	8th Aug. 1861, Nos. 153, 154.	Ibid
295& 296	Civil Paymaster authorized to pass certain charges on account of the toll establishments on the Devamany and Arbyle lines in North Canara.	14th May No. 1,037.	....	16th Feb. 1858, Nos. 85, 86. 19th April 1858, Nos. 110, 111. 10th July 1860, Nos. 167, 168.	1125
297 &298	Procs. Pub. Dept., circulating a small pamphlet on the subject of preserving specimens for the Museum, communicated to Chief Engr.	14th May No. 1,038.	....	16th April 1862, No. 102, Pub. Dept.	1126
299 &300	Dy. Chief Engr., Northern Circle, requested to instruct the Dist. Engr. Kurnool to show on the plan of the station of Kurnool the minor roads kept in repair from the Conservancy allowance.	14th May No. 1,039.	....	6th Sept. 1860, Nos. 59, 60. 11th March 1862, Nos. 289, 290.	Ibid
301 &302	Bill on account of the establishment for the levy of tolls on imperial lines of road in South Canara in the year 1858-59 and 1859-60, sanctioned.	14th May No. 1,040.	....	6th Oct. 1860, Nos. 99, 100. 17th March 1860, Nos. 275, 276. 21st Sept. 1861, Nos. 229, 230.	1127

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		1862.			
303 & 304	Procs. Eccl. Dept., requesting Venerable Thomas Dealtry to visit the Church at Tripassore, and report regarding the repair required for the same, communicated to Dy. Chief Engr., Central Circle.	14th May No. 1,041.	....	11th April 1862, Nos. 195, 196.	1128
305 & 306	List of Bill of the Dist. Engr. Madura, exceeding its estimate by more than five per cent., sanctioned.	14th May No. 1,042.	....	16th Sept. 1857, Nos. 10, 11.	1128 & 1129
307 & 308	Endorsement of Dy. Chief Engr., Southern Circle, forwarding letter from the Dist. Engr. Tanjore, reporting the loss caused by the rain in February last, recorded.	14th May No. 1,043.	....	20th March 1862, Nos. 330, 331.	1129 & 1130
309 & 310	Letter from Dy. Chief Engr., Northern Circle, reporting three accidents at the Pennár Anicut, with orders thereon.	14th May No. 1,044.	....	6th May 1862, Nos. 140, 141.	1130 & 1131
311 & 312	Dy. Chief Engr., Central Circle, required to report regarding the conduct of temporary Sub-Overseer A. Soobramaniem Mudali, during the past six months.	14th May No. 1,045.	....	19th Sept. 1860, Nos. 190, 191. 31st Jan. 1862, Nos. 194, 195.	1132
313 & 314	Letter from the Govt. of Bombay, requesting that an Officer may be appointed for taking charge of Pub. Works in the Condapoor Táluq, and stating that the services of Mr. Powell are no longer required, communicated to Chief Engr. and Dy. Chief Engrs., and the said Govt. to be addressed for a transfer of the Budget estimates on account of the above Táluq, as also Chief Engr. requested to report what provision should be made in the future Budgets on account of the above Táluq.	14th May No. 1,046.	....	27th Sept. 1861, Nos. 276, 277. 7th May 1862, Nos. 154, 155.	1133
315	Bombay Govt. informed of the instructions given to the Chief Engr. for taking charge of the Condapoor Táluq in the North Canara Dist., and requested to transfer the funds provided in the Bombay Budget for the said Táluq to this Presidency.	14th May No. 1,047.	....	14th May 1862, Nos. 313, 314.	Ibid
316 & 317	Letter from the Collr. of South Arcot, requesting that Captain Foord may be detained in that Dist. without being removed to Tanjore, recorded.	14th May No. 1,048.	....	None.	1134
318 & 319	Procs. Fin. Dept., requiring the submission of certain information on applications for sanction of expenditure of any kind, communicated to Chief Engr., &c.	14th May No. 1,049.	....	None.	1135

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
320 & 321	Procs. of Dy. Chief Engr., Southern Circle, authorizing the sum sanctioned for the erection of three latrines at Ootacamund to be expended in famine relief, approved, with an intimation that if it has not been expended before 1861-62, it will not be available during the following year.	1862. 15th May No. 1,050.	....	31st Dec. 1861, Nos. 590, 591. 10th March 1862, Nos. 135, 136. 5th April 1862, Nos. 76, 77.	1135 & 1136
322 & 323	Letter from the Executive Engr. North Canara, reporting that he has relieved Capt. G. A. Searle of his duties there and directed him to proceed to Godavery Dist., communicated to Chief Engr. and Dy. Chief Engrs., Northern and Central Circles.	15th May No. 1,051.	....	18th March 1862, Nos. 298—300.	1136
324 & 325	Estimate for improving the supply of water to the Boomy Codu and various subordinate channels in the Delta of the river Kistna, sanctioned.	15th May No. 1,052.	....	1st May 1862, Nos. 25, 26.	1137
326 & 327	A revised bill for Rs. 23,744-13-10, on account of the Waterloo bridge at Jackatalla, sanctioned.	15th May No. 1,053.	....	18th Feb. 1859, Nos. 35—37. 2nd March 1859, Nos. 9, 10. 16th March 1859, No. 12. 22nd March 1859, Nos. 133, 134. 8th April 1859, Nos. 99—101. 1st August 1861, Nos. 1—3.	1137 to 1140
328 & 329	Civil Paymaster required to make the necessary retrenchment in the salary of Mr. Merrall for the period he was absent on medical certificate.	15th May No. 1,054.	....	28th March 1862, Nos. 544, 545.	1141 & 1142
330 & 331	Dy. Chief Engr., Central Circle, requested to state the amount provided for on account of superintendence in the estimate for the construction of the road from Cuddapah to Ontimetta and furnish certain other information connected with the same.	16th May No. 1,055.	....	30th April 1862, Nos. 475, 476.	1142 & 1143
332 & 333	Procs. Finl. Dept., deciding that Mily. service of public servants who have quitted the Army and obtained employment in Civil Dept. before July 1860, should be counted for Pension, communicated to Chief Engr.	16th May No. 1,056.	....	12th May 1862, Nos. 38—40, Finl. Dept.	1143
334 & 335	Letter from the Dy. Chief Engr., Northern Circle, regarding the cost of levelling the Rampart and filling up the ditch of the Fort of Kurnool, communicated to the Rev. Dept., with a recommendation that it may be ordered on sanitary grounds.	16th May No. 1,057.	....	14th April 1862, Nos. 262, 263.	1143 & 1144

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336 & 337	Bills for alterations and additions to the Medical College buildings, sanctioned, and letter from the Officer in charge of the Audit and Account Depts. regarding the reimbursement to the Dist. Engr., Presidency, of the excess over the estimate, referred to the Educational Dept.	1862. 16th May No. 1,058.	....	16th Aug. 1861, Nos. 276, 277. 15th April 1862, Nos. 294, 295.	1144
338 & 339	Sum of Rs. 66-2-0 loss on account of advance made to a Contractor for the improvement of the Palligraram Channel in the Tanjore Dist., authorized to be written off to profit and loss and a further report from the Dy. Chief Engr., Southern Circle, regarding another item, awaited.	16th May No. 1,059.	....	None.	1145
340 & 341	Letter from the Professor of Chemistry, recommending the purchase of certain articles offered for sale by Mr. Faulkner, communicated to Dy. Chief Engr., Central Circle, with a request to state whether they can be used in connection with Gas works and whether they are worth the price they are offered at for sale.	16th May No. 1,060.	....	20th March 1862, Nos. 353, 354.	1146
342 & 343	Receipt of certain information called for by Dy. Chief Engr., Southern Circle, respecting the annual maintenance for dredging the Paumben channel, awaited, and copy of a Chart of the Paumben channel forwarded to the Superintendent of Marine for information.	16th May No. 1,061.	....	6th March 1861, Nos. 100, 101.	1147 & 1148
344 & 345	Procs. Mily. Dept., approving of the estimate for converting the south room on the upper story of the Medical Stores in the Fort into a storing room, communicated to Dy. Chief Engr., Central Circle, with a direction to proceed with the work from the General Funds at the disposal of the Dist. Engr., Presidency, for 1862-63.	16th May No. 1,062.	....	None.	1148
346 & 347	Procs. Mily. Dept., concurring in the the remarks of the Controller of Mily. Finance that the P. W. D. should be applied to in such cases as making a bund across a portion of the Toongabaddra, communicated to Dy. Chief Engr., Northern Circle.	16th May No. 1,063.	....	None.	1149
348 & 349	Procs. Mily. Dept., inquiring whether a competent person is available for putting up and organizing the working of the Engines for twelve Steam Incorporating Mills in the Gun Powder Manufactory, communicated to Chief Engr. for early report.	16th May No. 1,064.	....	10th May 1862, Nos. 239, 240. Mily. Dept.	Ibid

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		1862.	1862.		
350 & 351	Procs. Mily. Dept., requiring that the course suggested by the Govt. of India with regard to applications to local authorities in the Straits Settlements on matters such as the deterioration of Gunpowder may be observed in future, recorded.	16th May No. 1,065.	....	9th May 1862, Nos. 207, 208, Mily. Dept.	1149
352 & 353	Procs. Mily. Dept., regarding the Mily. lines of communication in the Madras Presidency, communicated to Chief Engr. and Dy. Chief Engrs., with a desire that the attention of the local Officers should be directed to the efficient keeping of the said lines.	16th May No. 1,066.	....	6th May 1862, Nos. 115, —118, Mily. Dept.	Ibid
354 & 355	Letter from the Principal of the Civil Engineering College, proposing that Mily. Students of the College may be allowed to proceed to their duties immediately on the Dist. Engr.'s approval of their appointment without waiting for their formal transfer from the Mily. Dept., referred to the Mily. Dept.	16th May No. 1,067.	....	None.	1150
356 & 357	Papers relating to the estimate for the construction of an additional Guard room at the entrance of the upper barracks at Raneepet in the Dist. of North Arcot, returned to Dy. Chief Engr., Central Circle.	16th May No. 1,068.	....	8th May 1862, Nos. 200, 201.	Ibid
358 & 359	Tabular Statement of the establishment for the Dowlaishwaram workshop as well as the Report of the Committee appointed for the revision of the Workshop Accounts and the Procs. of Govt. thereon, to be forwarded to the Govt. of India.	16th May No. 1,069.	24th May No. 37.	20th July 1861, Nos. 278, 279. 19th Dec. 1861, Nos. 246, 247.	1151
360	Tabular Statement for an improved establishment for the Dowlaishwaram Workshop in the Godavery Dist. and its subordinate branch at Bezwada in the Kistna Dist., submitted for sanction of the Govt. of India.	16th May No. 1,070.	....	Ditto.	1152
361 & 362	Procs. Rev. Dept., recognizing Capt. Beddome's claims and permitting him to resume the Office of Acting Conservator of Forests, communicated to Chief Engr.	16th May No. 1,071.	....	16th July 1860, Nos. 268, 269.	1158
363 & 364	Supplemental estimate for a Constable's Quarters and Tannah Station in Oodacall Street, sanctioned, and the work to be executed from the General Funds at the disposal of the Dist. Engr.	17th May No. 1,072.	....	8th April 1862, Nos. 159, 160.	Ibid

1. Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.	1862.		
365 &366	Acct. Genl. authorized to place a sum of Rs. 1,310 at the disposal of the Dist. Engr. Coimbatore from the Reserve Fund of the current year for repairing the building occupied by the male branch of the Lawrence Asylum at Ootacamund and the proceedings of the Dy. Chief Engr. directing Capt. Goddard to proceed with the above work, &c., approved.	17th May No. 1,073.	....	16th April 1862, Nos. 308, 309.	1159
367 &368	Bill for removing Govt. Stores from the North Beach to the Ferish Khanah in Chepauk, sanctioned, to be paid from the sum entered in the Budget for 1862-63 for freight, &c.	17th May No. 1,074.	....	14th June 1861, Nos. 149—151.	1159 & 1160
369 &370	Gratification of Govt. expressed at the report of the Dy. Chief Engr., Northern Circle, regarding the Manteral Canama Ghát in the Kurnool Dist. being open for bandy traffic and the exertions of Asst. Overseer Skipp and Sub-Overseers Vurdarajulu and Narsiah favorably noticed and submission of estimates for the approaches to the same required.	17th May No. 1,075.	....	27th Jan. 1862, Nos. 125, 126.	1160 & 1161
371 &372	Explanations given by the Consulting Engr. for Irrigation and Canal Company relative to certain entries in the Company's cash accounts for the quarter ending 30th Sept. 1861, accepted.	17th May No. 1,076.	20th May No. 35.	3rd April 1861, Nos. 9—11. 10th March 1862, Nos. 131, 132.	1162
373 &374	Construction of the Engr's. Office and Store yard at Chetterpoor in the Ganjam Dist., authorized.	17th May No. 1,077.	....	31st Dec. 1861, Nos. 596—598.	1163
375 &376	Sum of Rs. 810 authorized to be placed at the disposal of the Dist. Engr. Vizagapatam on account of work required to Kellagedda Tank in the said District.	17th May No. 1,078.	....	30th April 1862, Nos. 493, 494.	Ibid
377 &378	Rs. 300 value of the old wooden Flat said to have been lost to be written off to "Profit and Loss" and Lieut. Magnay to be reprimanded for delay and neglect in reporting the above matter.	17th May No. 1,079.	....	None.	1164
379 &380	Endorsement of the Consulting Engr. for Irrigation and Canal Company, submitting letter from the Agent as well as the Procs. of the Board of Directors on the subject of leave granted to Mr. W. G. L. Cotton, recorded.	17th May No. 1,080.	....	None.	1164 & 1165

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		1862.			
381—383	Dist. Engr. Ganjam requested to report in what manner the H Company of Sappers and Miners can be profitably employed until Nov. next.	19th May No. 1,081.	....	24th March 1862, Nos. 429, 430. 9th May 1862, Nos. 217, 218.	1165 & 1166
384 & 385	Endorsement of Dy. Chief Engr., Northern Circle, submitting report of the death in the Hospital of Mr. Neely the late Foreman in charge of the quarries in the Dist. of Nellore, recorded.	19th May No. 1,082.	....	6th May 1862, Nos. 140, 141.	1166
386 & 387	Account Current of the Irrigation and Canal Company's Stores for the half year ending 30th June 1861, passed.	19th May No. 1,083	....	17th April 1860, Nos. 133, 134. 12th April 1862, Nos. 239, 240. 2nd May 1862, Nos. 74, 75. 20th May 1862, Nos. 403, 404.	1167 & 1168
388 & 389	A sum of 1,400 Rs. to be placed at the disposal of the Dist. Engr. Malabar from the Reserve Fund of 1862-63 for the purchase of Capt. Kennedy's Bungalow at Luckadie.	19th May No. 1,084.	....	31st Dec. 1861, Nos. 505, 506. 8th April 1862, Nos. 149, 150.	1168 & 1169
390 & 391	A sum of Rs. 20,000 authorized to be placed at the disposal of the Dist. Engr. Coimbatore from the Reserve Fund of the current year for works in relief to the suffering poor in the Dist.	19th May No. 1,085.	....	3rd April 1862, Nos. 68, 69. 17th April 1862, Nos. 345, 346.	1169
392 & 393	Letter from Dy. Chief Engr. Central Circle, stating that the estimate for Perambore Lines was calculated for the repair of the whole of the huts as they stand at present and not for a reduced establishment of Native Regiments, communicated to Mily. Dept.	19th May No. 1,086.	....	5th April 1862, Nos. 107, 108. 2nd May 1862, Nos. 62, 63.	1170
394 & 395	Procs. Mily. Dept., forwarding letter from the Quarter Master Genl. stating that no Lock Hospital will be required in future at Poonamallee, communicated to Dy. Chief Engr., Central Circle.	19th May No. 1,087.	....	21st March 1862, Nos. 365, 366.	Ibid
396 & 397	Procs. Mily. Dept., cancelling the order sanctioning the construction of a building for Malt Liquor Store, communicated to Dy. Chief Engr., Central Circle.	19th May No. 1,088.	....	5th May 1862, Nos. 119, 120.	Ibid
398 & 399	Procs. Judl. Dept., on the letter of the Inspector General of Jails, stating that Tranquebar is a proper place where paddy beating by wind power can be satisfactorily introduced, communicated to Chief Engr. for report.	19th May No. 1,089.	....	9th April 1862, Nos. 175, 176.	Ibid

1 Index numbers of the Proceedings	2 Subjects	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
400 & 401	A letter to the Govt. of India regarding the proposed transfer of the Godavery Navigation Works from Madras to the Central Provinces, resolved to be despatched.	19th May No. 1,090.	....	10th April 1862 No. 190. 3rd May 1862, No. 110.	1117 & 1173
402	Transfer of the Godavery Navigation Works to the Central Provinces assented to, but the construction of an Anicut about 20 miles above Rajahmundry, to be reserved.	19th May No. 1,091.	....	None.	1173
403 & 404	Indents for Stores submitted by the Consulting Engr. for Irrigation and Canal Company, approved.	20th May No. 1,092.	....	4th Dec. 1861, Nos. 46, 47. 12th April 1862, Nos. 239, 240. 19th April 1862, Nos. 386, 387.	1173 & 1174
405 & 406	Accountant General requested to place at the disposal of the Dist. Engr. Godavery, Rupees 9,200 for constructing two iron lattice Girder bridges in the above Dist	20th May No. 1,093.	....	9th May 1862, Nos. 223, 224	1174
407 & 408	Promotion and transfer of C. Shadagopum and other subordinates in the Districts of Tanjore, Trichinopoly and Madura, approved.	20th May No. 1,094	....	20th March 1862, Nos. 349, 350.	1175 & 1176
409 & 410	Dy. Chief Engr., Central Circle, informed that the sum applied for by him on account of the Malt Liquor Godown at Madras will no longer be required under the orders of the Milty. Dept.	20th May No. 1,095.	....	5th May 1862, Nos. 119, 120.	1176 & 1177
411 & 412	Procs. Milty. Dept. on the question of the plans and estimates for the accommodation of married Soldiers of the Artillery at the Mount, communicated to Chief Engr. and Dy. Chief Engr., Central Circle.	20th May No. 1,096.	....	5th May 1862, Nos. 130, 131.	1177
413 & 414	Endorsement of the Officer in charge of the Audit and Account Depts., forwarding abstract statement of the outstanding advances, &c., up to 31st March 1862. submitted by the Dist. Engr. Tanjore, with orders thereon.	20th May. No. 1,097.	....	27th Nov. 1861, Nos. 331, 332. 20th. Feb. 1862, Nos. 341, 342.	1177 to 1179
415 & 416	Estimate for certain improvements in connection with the Byrapore and Locherla Tanks in the Pengondah Táluq of Bellary, sanctioned.	20th May No. 1,098.	....	None.	1179 & 1180
417 & 418	Gutta percha tubing refused to be sent to England for sale and Dy. Chief Engr., Central Circle, directed to sell the same at the Presidency and submit a report of it	20th May No. 1,099	....	None.	1180 & 1181

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
419 &420	Resolution of the Board of Directors to increase the salary of Chief Engr. I. and C. Compy., from Rs 1,250 to 2,000 Rs. concurred in.	21st May No. 1,100.	....	1st Oct. 1860, Nos. 11, 12. Letter to England, dated 1st Oct. 1860, No. 64. 13th March 1861, Nos. 206, 207.	1181
421 &422	Displeasure of Govt. against the Forest Dept. for the supply of very inferior Teakwood made by them on account of the European Barracks at Trichinopoly, intimated and warning given against a recurrence of a similar neglect.	21st May No. 1,101.	....	7th April 1862, Nos. 147, 148.	1181 & 1182
423 &424	Copies of a letter from the Govt. of North West Provinces, regarding Mr. Asst. Supervisor Grant's method of Hanging and Pulling Punkahs, forwarded with certain observations to Dy. Chief Engrs. and Chief Engr.	21st May No. 1,102.	....	15th Feb. 1862, Nos. 253—255. 22nd May 1862, Nos. 447, 448.	1183 to 1188
425 &426	Construction of an Anicut by the I. and C. Compy., over the Pennar not objected to, but the Consulting Engr. required to take the necessary precautionary measures to secure the interests of the Nellore District and have a formal deed executed by the Company before they are permitted to proceed with the work.	21st May No. 1,103.	....	14th May 1860, Nos. 41, 42. 8th June 1860, Nos. 115, 116. 20th Nov. 1860, Nos. 311—315.	1188 & 1190
427 &428	Reply of the Collector of Madras to the reference made to him by Dy. Chief Engr. Central Circle whether the bridge between Genl. Tulloch's and Mr. Aratoon's Gardens at Nungumbaukum, the Presidency District, is public or private property, is awaited before the estimate for the same is sanctioned.	21st May No. 1,104.	....	None.	1191
429 &430	Estimate for certain improvements to the Munzerabad Ghat in South Canara, sanctioned.	21st May No. 1,105.	....	17th July 1861, Nos. 218, 219.	1191 & 1192
431 &432	Requesting the Board of Rev. to furnish certain information and statements in connection with the re-organization of the D. P. W., ordered by the Secy. of State.	21st May No. 1,106.	....	24th Dec. 1860, Nos. 353—369. 31st Dec. 1861, Nos. 483 to 486. Letter to England, dated 31st Dec. 1861, No. 34.	1192 to 1195
433 &434	P. Thungavaloo Mudali lately passed through the Insolvent Court, permitted to resume his duties in the Central Office Dept. Pub Works, but refused his pay in arrears.	21st May No. 1,107.	....	10th Aug. 1857, Nos. 59, 60, Pub. Dept. 28th Oct. 1859, Nos. 113—115.	1195 & 1196
435 &436	Accounts to the I. and C. Compy. for the fourth quarter of 1861, passed.	21st May No. 1,108.	....	10th March 1862, Nos. 131, 132.	1196 & 1197

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
437 & 438	Agent to the I. and C. Compy. informed that Reports, &c., relating to irrigation works applied for by him can be purchased at the Book sellers in Madras or at the Govt. Press Office.	21st May No. 1,109.	....	None.	1198
439 & 440	Letter from the Controller of Mily. Finance, regarding certain Bills, communicated to the Acct. Genl. and the Officer in charge of the Audit and Account Depts., the latter of whom is called upon to furnish certain information in connection with the same.	21st May No. 1,110.	....	7th May 1862, Nos. 160, 161.	1198
441 & 442	Letter from the Govt. of Bombay, intimating the delivery of the Brick making and Tile turning Machines to the Agent deputed from Madras to take charge of the Machinery at Beitkál, communicated to Chief Engr. and a letter ordered to be despatched to the Govt. of Bombay.	21st May No. 1,111.	....	7th May 1862, Nos. 166—168. 12th May 1862, Nos. 247, 248.	1199
443	Govt. of Bombay informed that this Govt. is not aware of having deputed an Agent from Madras to receive charge of the Machinery at Beitkál, with a remark that it would have been better if they were taken charge of by the Pub. Works Dept. of Bombay without putting the State to the expense and the Machines to risk of injury from their re-shipment.	21st May No. 1,112.	....	Ditto.	Ibid
444 & 445	Letter from the Accountant General, forwarding a Statement of the sums disbursed at this Presidency on account of Irrigation and Canal Company from 1st January to 30th April 1862, communicated to the Consulting Engr. for the said Company and the Secretary of State for India.	22nd May No. 1,113.	....	20th Sept. 1860, Nos. 222, 223. 10th Feb. 1862, Nos. 137, 138.	1199 to 1201
446	Copy of a Statement showing the sums disbursed in Madras Presidency on account of the Madras Irrigation and Canal Company from 1st January to 30th April 1862, forwarded to the Secretary of State for India.	22nd May No. 1,114.	....	Ditto.	1201
447 & 448	Procs. Mily. Dept., regarding Mr. Grant's Watering Troughs and Punka Pulling Apparatus, communicated to Chief Engr. and Dy. Chief Engrs.	22nd May No. 1,115.	....	21st May 1862, Nos. 423, 424.	Ibid
449 & 450	Bullocks and carts lately purchased and employed on account of Govt. in the Dist. of Tanjore, ordered to be sold.	22nd May No. 1,116.	....	11th July 1860, Nos. 208, 209. 27th June 1861, Nos. 312, 313	1202 & 1203

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
451—453	An increased allowance of 150 Rupees a mile on account of Sampajee Ghát and road within the Province of Coorg, sanctioned, and certain arrangements in connection with the transfer of the above Ghát and road as well as the Perambady Ghát to Mysore, ordered.	22nd May No. 1,117.	....	29th Oct. 1861, Nos. 368, 369. 22nd March 1862, Nos. 395, 396.	1204 & 1205
454	Commissioner of Mysore informed that maintenance allowance for the Sampajee line lying within the limits of Coorg has been raised from 100 Rupees to Rupees 150, and requested to make provision in future Budgets of that Government for the maintenance of the line as well as that of Perambady lying within the limits of Coorg.	22nd May No. 1,118.	....	Ditto.	1206
455 & 456	Estimate for dismantling the walls of the Fortifications of the old town of Trichinopoly and converting the site into a Circular Road, &c., sanctioned, but its execution deferred until certain information now called for shall be furnished.	22nd May No. 1,119.	....	14th May 1860, Nos. 27—29, Rev. Dept., 14th July 1860, Nos. 170, 171, Rev. Dept.	1207
457 & 458	Maintenance allowance for the road between Casseboogah and Dendagedda in Ganjam, sanctioned.	22nd May No. 1,120.	....	24th Aug. 1857, Nos. 44, 45. 31st March 1862, Nos. 585, 586.	1208 & 1209
459 & 460	Suggestion of the Dy. Chief Engr., Central Circle, to remit to Lieut. Col. Walker the scheme for the construction of a Dam at Mangalore in South Canara to close the mouth of the Gurpur river, approved.	23rd May No. 1,121.	....	31st Dec. 1861, Nos. 596—598. 25th March 1862, No. 34, Mis.	
461 & 462	Letter from the Dy. Chief Engr., Central Circle, regarding the new Dragoon Barracks at Bangalore, communicated to Mily. Dept.	23rd May No. 1,122.	....	12th May 1862, Nos. 249, 250.	1209
463 & 464	Indent submitted by the Consulting Engr. for Irrigation and Canal Company for Medicines to be procured from England, sanctioned.	23rd May No. 1,123.	....	21st July 1860, Nos. 348, 349.	1209 & 1210
465 & 466	Plans and estimate to certain improvements to the General Hospital, to be forwarded for sanction of the Govt. of India.	23rd May No. 1,124.	....	1st Aug. 1859, Nos. 50, 51. 5th Oct. 1859, Nos. 3—5. 20th March 1862, Nos. 345, 346.	1210
467	Letter to the Govt. of India on the foregoing subject.	23rd May No. 1,125.	....	Ditto.	1211
468 & 469	A sum of Rupees 62½ for repairing 2½ miles of road leading to the Peat Bog at Wellington, sanctioned.	23rd May No. 1,126.	....	31st Dec. 1861, Nos. 596—598.	1213
470 & 471	Dist. Engr., Malabar, requested to take steps to ascertain during the South-west monsoon of the current year the effect of the surf at the Vypeen Point of the Cochin Harbour and report the result.	23rd May No. 1,127	....	26th March 1862, Nos. 484, 485.	1213 & 1214

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
472& 473	Letter from the Chief Engineer, reporting that notice was served on Mr. Covenanted Overseer Evans, on the 15th of April 1862, recorded.	23rd May No. 1,128.	....	28th March 1862, Nos. 558 A. 558 B. 558 C.	1214 &. 1215
474& 475	Procs. Military Department, returning the estimate for constructing a Hospital Serjeant's Quarters at Bellary as being very high, communicated to Deputy Chief Engineer, Central Circle.	23rd May No. 1,129.	....	11th Sept. 1861, Nos. 90, 91. 14th Feb. 1862, Nos. 213, 214.	1215
476& 477	Procs. Military Department, sanctioning the estimate for the construction of certain drains in connection with the Native Infantry Lines at Perambore, communicated to Deputy Chief Enginner, Central Circle.	23rd May No. 1,130.	....	2nd May 1862, Nos. 62, 63.	Ibid
478 &479	Accountant General requested to place Rupees 730 at the disposal of the District Engineer Presidency, on account of a temporary shed to be used as a Double Skittle Alley in the Fort.	23rd May No. 1,131.	....	2nd May 1862, Nos. 60, 61.	Ibid
480& 481	Procs. Revenue Department, approving of the estimate for making certain additions and repairs to the Húzúr Printing Office in the Collector's Kacheri in the District of Tinnevelly, communicated to Deputy Chief Engineer, Southern Circle, with a direction requiring to execute the same from the allotment in the Budget under the head of "Repairs to Revenue Buildings."	23rd May No. 1,132.	....	16th May 1862, Nos. 300, 301, Rev. Dept.	1216
482& 483	Procs. Judicial Department, sanctioning the construction of a Cook room, &c., to the Penitentiary Madras, communicated to Deputy Chief Engineer, Central Circle.	23rd May No. 1,133.	....	20th April 1862, Nos. 313, 314.	Ibid
484& 485	Endorsement of Deputy Chief Engineer, Northern Circle, submitting report from the District Engineer, Nellore, of the Inquest held on the bodies of Venkatarayalu and Mr. Neely, who died of accident at the Quarries, recorded.	23rd May No. 1,134.	....	19th May 1862, Nos. 384, 385.	1216 & 1219
486& 487	Renting of buildings for Offices and Store-rooms of the Irrigation and Canal Company in the Divisions from September 1861, sanctioned.	23rd May No. 1,135.	....	29th April 1862, Nos. 454, 455.	1219
488& 489	Procs. Judicial Department, regarding the property of the Convict Francis Luis D'Almeida in Tellicherry, communicated to Deputy Chief Engineer, Southern Circle.	23rd May No. 1,136.	....	3rd May 1862, Nos. 86, 87.	Ibid

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
490 & 491	A sum of 500 Rs. sanctioned for each Dist. from Repair Funds of 1862-63, for fencing and planting the channel banks and recourse to this source required to be made only when Local Funds cannot be had and that where there are no Local Funds a Grass Fund may be created.	23rd May No. 1,137.	....	22nd Sept. 1855, Nos. 40, 41. 25th Aug. 1860, Nos. 334, 335. 20th Dec. 1860, Nos. 265, 266.	1218 & 1219
492 & 493	An English translation of the Tamil Paper on the Forts in Coimbatore Dist. as well as a transcript of a story in Mahabharat, forwarded to the Madras Literary Society.	24th May No. 1,138.	....	12th March 1862, Nos. 166, 167.	1220
494 & 495	Estimate for certain alterations required to the Southern Bungalow at Chepauk, made over to the Office of the Conservator of Forests, returned to Dy. Chief Engr., Central Circle, for revision and re-submission.	24th May No. 1,139.	....	3rd March 1862, Nos. 34, 35. 25th April 1862, Nos. 395, 396.	1220 & 1221
496 & 497	Certain information called for from the Board of Rev., and the Dy. Chief Engr., Northern Circle, regarding the Civil Dispensary at Masulipatam, awaited.	24th May No. 1,140.	....	5th May 1862. Nos. 128, 129.	1221
498 & 499	Report of the Dy. Chief Engr., Southern Circle, regarding the progress of the road from Trichinopoly to Salem up to 30th April 1862, awaited.	24th May No. 1,141.	....	24th Dec. 1861, Nos. 310, 311. 27th May 1862, Nos. 546, 547.	1222
500 & 501	Estimates for repairing the road between Coonoor and Kotagherry and the roads within the station of Kotagherry in Coimbatore Dist. sanctioned.	24th May No. 1,142.	....	None.	1223
502 & 503	Accountant Genl. requested to place certain sums from the Reserve Fund of the current year at the disposal of the several Dist. Engrs. for certain works.	24th May No. 1,143.	....	20th Feb. 1862, Nos. 345, 346. 26th March 1862, Nos. 493, 494. 31st March 1862, Nos. 585, 586. 2nd April 1862, Nos. 48, 49. 7th April 1862, Nos. 131, 132. 15th April 1862. Nos. 276, 277. 28th April 1862, Nos. 420, 421. 29th April 1862, Nos. 467, 468.	1223 & 1224
504 & 505	Dy. Chief Engr., Southern Circle requested to inform the reason of the great difference between the amount of the estimate of the building or Chuttrum for Coolies at Coonoor, Coimbatore Dist., and the cost of a similar building referred to by the late Collector in Captain Goddard's letter.	24th May No. 1,144.	....	27th June 1862, Nos. 3873—89.	1224

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4. Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
506 & 507	An additional sum of Rs. 500 for increasing from 12 to 15 feet the head-way of two bridges in the fourth and fifth portions of the first section of Irrigation Company's Main Canal, sanctioned.	24th May No. 1,145.	....	28th March 1862, Nos. 526, 527.	1224 & 1225
508 & 509	Letter from Chief Engr., stating that the arrangement sanctioned on account of the carriage hire to Mr. Doderet may be adopted, communicated to Public Works.	24th May No. 1,146.	....	30th Nov. 1861, 10 in No. 376. 3rd May 1862, Nos. 88, 89.	1225
510 & 511	Substitution of an Iron railing for the balustrade, in the new wing to the General Hospital, approved, and difference of this estimate and that for balustrades to be met from the General Funds of the Presidency District for the current year.	24th May No. 1,147.	....	23rd July 1861, Nos. 322, 323. 11th Sept. 1861, Nos. 86, 87. 31st Oct. 1861, 10 in No. 408.	1225 & 1226
512 & 513	Supplemental estimate for completing the wooden railings to the Sea Custom House, sanctioned.	24th May No. 1,148.	....	27th March 1861, Nos. 437, 438. 24th April 1862, Nos. 372, 373.	1226
514 & 515	Certain sum outstanding on account of repairs executed to works in the several Estates between 1844 and 1847 in the old Rajahmundry District to be written off, and Bills on account of same works in the same District previous to 1856, passed.	24th May No. 1,149.	....	None.	1227 to 1230
516 & 517	Circular from the Govt. of India, regarding the distribution of funds for Public Works for 1862-63, communicated to Chief Engr., &c.	24th May No. 1,150.	....	8th May 1862, Nos. 209, 210.	1231 to 1239
518 & 519	Civil Paymaster authorized to pass Mr. G. Clements' salary Bills for the period intervening between the 11th Feb. and the 28th April last.	24th May No. 1,151.	....	25th April 1862, Nos. 397—400.	1241
520 & 521	Copy of the Budget estimate for 1862-63 submitted by the Director of Public Instruction, forwarded to the Accountant General.	24th May No. 1,152.	....	27th August 1861, Nos. 397, 398. 31st Dec. 1861, Nos. 541, 542.	1241 & 1242
522 & 523	An additional sum of Rupees 879 for the completion of the Road Dam on the 93rd mile of Trunk Road No. 6 in the Nellore Dist., sanctioned from the Reserve Fund of the current year.	26th May No. 1,153	....	24th Nov. 1857, Nos. 145, 146.	1242 & 1243
524 & 525	Procs. Rev. Dept., sanctioning the entertainment of a Surveyor and four Lascars for surveying properties on the Neilgherry Hills, communicated to Chief Engr. and Dy. Chief Engr., Southern Circle, and Chief Engr., requested to supply them the necessary instruments.	26th May No. 1,154.	....	19th May 1862, Nos. 333, 334, Rev. Dept.	1243

1. Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
526 & 527	Procs. Rev. Dept., requesting the Board to pay the parties whose lands are likely to be submerged by the Irrigation and Canal Company's Canal, and instruct Mr. Minchin to use every effort to grant land in exchange from Govt. waste and resort to money compensation when land is not procurable, communicated to Consulting Engr. of the above Company.	26th May No. 1,155.	....	8th Feb. 1862, Nos. 122, 123. 17th March 1862, Nos. 259—261.	1244
528 & 529	Procs. Mily. Dept. on the subject of lands required for the accommodation of the Battery of Artillery stationed at Waltair, communicated to Deputy Chief Engineer, Northern Circle.	26th May No. 1,156.	....	27th March 1862, Nos. 497—499. 31st March 1862, Nos. 581, 582.	Ibid
530 & 531	Procs. Finl. Dept., forwarding copy of a letter from the Government of India to the Civil Paymaster, replying to certain questions in connection with the pay of Officers proceeding to Europe on Medical Certificate, communicated to Chief Engineer and Deputy Chief Engineers.	26th May No. 1,157.	....	None.	Ibid
532 & 533	Procs. Judl. Dept. sanctioning the construction of a new Kitchen, &c., to the Bungalow in Tunkum, Madura, communicated to Deputy Chief Engineer, Southern Circle, with a direction to execute the work from the General Funds of the Madura District.	26th May No. 1,158.	....	19th May 1862, Nos. 134, 135. Judicial Dept.	Ibid
534 & 535	Letter from the Chief Engineer on the subject of the tests to which Military Officers, who are Candidates for the Department Public Works, are subjected before they are permanently appointed thereto, communicated to Military Department.	26th May No. 1,159.	....	4th April 1862, Nos. 85, 86.	1245
536 & 537	Endorsement of the Chief Engineer, submitting letter from the Deputy Chief Engineer, Northern Circle, reporting that he has called for the information regarding the amount realized by the sale of rejected anchors, &c., of Blyth's Steam Tugs, recorded.	26th May No. 1,160.	....	27th Nov. 1861, Nos. 341, 342.	1246
538 & 539	Irrigation Registers of the Kurnool District for Faslis 1261 to 1265, returned to Deputy Chief Engineer, Northern Circle, with a direction to supply the deficiencies therein found in the Register for the ensuing five Faslis.	26th May No. 1,161.	....	23rd Nov. 1858, Nos. 135, 136.	Ibid

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
540 & 541	Procs. Judl. Dept., sanctioning the estimate for making a good masonry floor to the large enclosure used as a general Privy at the Penitentiary, communicated to Deputy Chief Engineer, Central Circle, with a request to execute the work from the Repair Funds of the Presidency District.	26th May No. 1,162.	....	8th April 1862, Nos. 161, 162.	1247
542 & 543	Procs. Rev. Dept. regarding the report on North Canara by Colonel Turner and Mr. H. Hope, and the orders of Bombay Government thereon, communicated to Deputy Chief Engineer, Central Circle.	26th May No. 1,163.	....	29th April 1862, Nos. 389, 390. Revenue Dept.	Ibid
544 & 545	Chief Engineer and Superintendent of Stationery, authorized to supply Lieutenant-Colonel Rundall certain articles required by him on the conditions specified in his letter.	26th May. No. 1,164.	....	None.	Ibid
546 & 547	Endorsement of the Dy. Chief Engr., Southern Circle, submitting letter from the Dist. Engr. Trichinopoly, on the condition of the Salem road, recorded.	27th May No. 1,165.	....	24th May 1862, Nos. 498, 499.	1247 & 1248
548 & 549	Endorsement of Dy. Chief Engr., Northern Circle, recommending the grant of Rupees 5,000 from the Reserve Fund for expenditure on Trunk Road No. 7, in 1862-63, recorded.	27th May No. 1,166.	....	20th Feb. 1862, Nos. 345, 346. 12th April 1862, Nos. 220, 221, 24th May 1862, Nos. 502, 503.	1248 & 1249
550 & 551	A gratuity of Rupees 24 to be paid to Cooly Ruskala Lutchmiah who met with an accident at the Anicut works, Nellore, so as to necessitate the amputation of his leg.	27th May No. 1,167.	....	14th May 1862, Nos. 309, 310.	1249
552 & 553	Endorsement of Dy. Chief Engr., Central Circle, submitting letter from the Dist. Engr. Presidency, reporting the measures adopted by him regarding the new buildings at the Gun Powder Manufactory, communicated to Mily. Dept.	27th May No. 1,168.	....	13th March 1862, Nos. 207—209.	1249 & 1250
554 & 555	M. Kristniah, late Sub-Overseeer Nellore Dist., permitted to be re-employed in any other branch of the service, but refused to be exempted from passing the Uncovenanted service examination.	27th May No. 1,169.	....	None.	1250 & 1251
556 & 557	A letter ordered to be despatched to the Commissioner of Mysore, regarding the Máuri Canvai Reservoir.	27th May No. 1,170.	....	12th April 1862, Nos. 217—219.	1252

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
558	Commissioner of Mysore requested to furnish the report of the Chief Engr. of that Govt. regarding the scheme of the Máuri Canvai Reservoir, as also certain information tending to show that the conclusions of the Commissioners were incorrect.	27th May No. 1,171.	....	12th April 1862, Nos. 217—219.	1252
559 & 560	Indent made by the Assistant to the Chief Engr. for certain articles for use in the Store Dept., sanctioned.	27th May No. 1,172.	....	Ditto.	Ibid
561 & 562	Procs. Ecclesiastical Dept., sanctioning the estimate for enclosing with a wall and protecting the Burial Ground near Fort Saint David, in South Arcot, communicated to Chief Engr., and Dy. Chief Engr., Central Circle.	27th May No. 1,173.	....	19th March 1862 Nos. 326, 327.	1253
563 & 564	Treasury order for Rupees 182-8-0, ordered to be issued for the payment of the Pier establishment in arrears for the month of April 1862.	27th May No. 1,174.	....	28th April 1862, Nos. 424, 425.	Ibid
565 & 566	All work to Punkahs in the Presidency to be transferred from the Dist. Engr. to the Barrack Master.	27th May No. 1,175.	....	12th March 1858, Nos. 151, 152. 12th Aug. 1858, Nos. 23, 24. 12th April 1859, Nos. 91, 92. 3rd May 1861, Nos. 104, 105.	1253 & 1254
567 & 568	Dy. Chief Engr., Central Circle, informed that he can direct the Dist. Engr. Presidency to proceed with operations for widening and improving the Genl. Hospital gate bridge and that of the Elephant also.	27th May No. 1,176.	....	24th May 1862, Nos. 516, 517.	1254 & 1255
569 & 570	Letter from the Officer in charge of the Audit and Account Depts. explaining the cause of the delay in the adjustment of certain Bills, recorded.	28th May No. 1,177.	....	12th April 1862, Nos. 237, 238.	1255
571 & 572	Civil Paymaster authorized to pass to Captain Flint the full salary of 2nd Asist. Dist. Engr. from the date on which Captain Syme's full salary became available.	28th May No. 1,178.	....	None.	1255 & 1256
573 & 574	Memo. from Dy. Chief, Engr. Central Circle, informing of the partial destruction of the Kulputty bridge by an excessive flood, recorded.	28th May No. 1,179.	....	None.	1257
575 & 576	Endorsement of Dy. Chief Engr., Northern Circle, submitting letter from the Dist. Engr., Kurnool, reporting the loss and damage done to a new bridge under construction near Nundial by an unseasonable and very high fresh in the river Kunderu, recorded.	28th May No. 1,180.	....	None.	1257 & 1258

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
577 & 578	Dy. Chief Engr., Southern Circle, required to submit Bills for expenditure already incurred in excess of the annual maintenance grants for certain roads in South Arcot accompanied with full explanation for the cause of the excess.	28th May No. 1,181	....	22nd Jan. 1862, Nos. 92, 93.	1258 & 1259
579 & 580	Dy. Chief Engr., Central Circle, requested to call on the Dist. Engr. Presidency to submit an estimate to plaster the north-east Demi Bastion of Fort Saint George with stone lime, with an observation that sufficient encouragement is not seen for an extended trial of Mr. Ransome's patent solution.	28th May No. 1,182.	....	11th Oct. 1861, Nos. 156, 157. 5th Nov. 1861, Nos. 39, 40.	1259
581 & 582	Receipt of the opinion of the Govt. Solicitor on Mr. Fraser's case with regard to his failure to pass the prescribed examination, awaited, and Mr. Brosnaham warned to be dismissed if he fails to comply with the rules of the Dept. to pass the examination.	28th May No. 1,183.	....	8th March 1861, Nos. 134, 135. 13th Dec. 1861, Nos. 168, 169.	1260 & 1261
583 & 584	Cost of the Cochrane's Canal establishment to be debited to the provision made in the Budget of the current year for Travellers' Bungalows and Native Chuttrums, &c., under the head "E Works of Internal Improvement" and the complaint of the Accountant General as to no allusion having been made by Revenue Department with regard to certain charges struck out by it, referred to that Department and due provision required to be made for the Cochrane's Canal establishment in future Budgets.	28th May No. 1,184.	....	5th Feb. 1862, No. 60.	1261
585 & 586	Dy. Chief Engr., Southern Circle, required to issue instructions to the District Engr., Salem to disburse from the General Funds at his disposal for the current year the amount of the Bill for certain improvements, &c., to the room allotted as a Veterinary Pharmacy at the Remount Depôt Oossoor.	28th May No. 1,185.	....	9th May 1862, Nos. 209, 210. Mily. Dept.	1262
587 & 588	Letter from Dy. Chief Engr., Northern Circle, reporting the completion of the Tahsíldár's Kacheri at Chicacole in the District of Ganjam, communicated to Rev. Dept.	28th May No. 1,186.	....	13th Feb. 1862, Nos. 187, 188. 18th March 1862, Nos. 277, 278.	Ibid.
589 & 590	A notification antedating Lieut. Pennycuick's appointment to 4th April 1862, directed to be published in the "Fort St. George Gazette."	28th May No. 1,187.	....	None.	1262 & 1263
591 & 592	Estimate for annual repairs to the roads of Fort St. George, sanctioned.	29th May No. 1,188.	....	24th Dec. 1861, Nos. 322, 323.	1264

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
593 & 594	Procs. Mily. Dept., approving of the estimate for constructing a Powder Magazine for the use of the Artillery stationed at Bellary, communicated to Dy. Chief Engr. Central Circle, and the same to be provided from the Reserve Fund of 1862-63.	29th May No. 1,189.	…………	9th May 1862, Nos. 180, 181. Mily. Dept.	1264
595 & 596	Proposal of the Dy. Chief Engr., Central Circle, to break up the Cargo Boat and use the timber for repairs, approved.	29th May No. 1,190.	…………	15th Feb. 1862, Nos. 245, 246.	1264 & 1265
597 & 598	A Bill for Rupees 60 on account of a Crane constructed by the District Engr., Madura, sanctioned, and the amount to be debited under the head "stores of the P. W. D." and the charge to be relieved from the work on which the Crane may be employed.	29th May No. 1,191.	…………	6th March 1862, Nos. 63, 64.	1265
599 & 600	Bill for constructing a Cable Shed at Auteenkarry for Telegraph Dept. in Madura, sanctioned.	29th May No. 1,192.	…………	8th Dec. 1859, Nos. 111, 112. 21st Dec. 1861, Nos. 537, 583.	1266
601 & 602	Procs. Judl. Dept., sanctioning the estimate for building a District Moonsiff's Court House at Caroongooly, communicated to Dy. Chief Engr., Central Circle, and the same to be provided from the Reserve Fund of 1862-63.	29th May No. 1,193.	…………	5th Feb. 1862, Nos. 58, 59.	1267
603 & 604	Authority granted for a further advance of Rs. 3,000 being made from the sum appropriated in the Budget of 1862-63 to "Marine" for fitting up the Steam Dredge at Negapatam, and the estimate for fitting up the said dredge and the cost of working it required to be submitted without delay.	29th May No. 1,194.	…………	28th Jan. 1862, Nos. 131, 132.	1267 & 1268
605 & 606	Letter from the Govt. of India, requiring to be furnished with a return of Officers as per Memorandum accompanying it, communicated to Chief Engr. Rev. and Mily. Depts.	29th May No. 1,194.	…………	None.	1268
607 & 608	Circular from the Govt. of India, requiring Depts. making applications for additional grants after sanction of the General Annual Budget to state the class of service for which the grant is required, recorded.	29th May No. 1,196.	…………	None.	1269.
609 & 610	The sum of Rs. 15-13-6 not accounted for by the Dist. Engr. North Canara, authorized to be written off of to "Profit and Loss."	29th May No. 1,197.	…………	None.	1270
611 & 612	Procs. Pub. Dept., communicating Home Despatch notifying the arrangements consequent on the absence of Sir Charles Wood from Town, recorded.	30th May No. 1,198.	…………	None.	1271

1 2 Index numbers of the Proceed-ings.	2 Subjects.	3 Dates of Proceed-ings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
613& 614	Estimate for pulling down and re-building the Cable Shed erected at Attankurray, Madura Dist., sanctioned and Dy. Chief Engr., Southern Circle, required to report from what funds the existing shed was built.	30th May No. 1,199.	....	29th May 1862, Nos. 599, 600.	1271
615& 616	Adoption of the Forms of Indentures and Indemnity Bonds for Candidates for Apprenticeship, sanctioned, and the opinion of the Chief Engr. with respect to their examination by the Principal of the Civil Engineering College concurred in.	30th May No. 1,200.	....	11th May 1860, Nos. 1, 2. 29th May 1861, Nos. 239, 240.	1271 & 1272
617& 618	A letter to be despatched to the Govt. of Bombay with reference to their letter enquiring whether the services of any of the Supernumerary Engrs. on their Establishment are required in the Madras Presidency.	30th May No. 1,201.	....	None.	1272
619	Govt. of Bombay on the foregoing subject.	30th May No. 1,202.	....	None.	Ibid
620& 621	Bill for the survey of the Nursapoor Harbour in the Godavery Dist., sanctioned.	30th May No. 1,203.	....	6th Jan. 1857, Nos. 41, 42.	1273
622& 623	Bill required to be submitted for a new iron stink trap in the cesspool of the drain in the yard of the Fort school.	30th May No. 1,204.	....	2nd May 1862, Nos. 68, 69.	1273 & 1274
624& 625	Bill for an Engine shed constructed at the Engineer workshops at Nellore, sanctioned.	30th May No. 1,205.	....	30th Nov. 1859, Nos. 185, 186.	1274
626& 627	Estimate for repairing the roadway over the College Bridge and the roads in St. Andrews' Church compound, sanctioned.	30th May No. 1,206.	....	None.	1274 & 1275
628& 629	Procs. Rev. Dept., regarding the Collection of the Returns from and the management of the Irrigation and Canal Company's works, communicated to Chief Engr.	30th May No. 1,207.	....	10th Dec. 1861, Nos. 113, 114.	1275
630& 631	Letter from Dy. Chief Engr., Northern Circle, reporting that he has informed Captain Haig to make his own arrangements with regard to the transit operations on the Godavery, recorded.	30th May No. 1,208	....	3rd May 1862, Nos. 108, 109.	1275 & 1276
632& 633	Estimate for constructing two groynes of rough stone on the right bank of the Cauvery near the village of Vangul in the Caroor Range, Coimbatore Dist., sanctioned.	30th May No. 1,209.	....	None.	1276
634& 635	Estimate for constructing three surplus sluices in the north bank of Coleroon near the Town of Lalgudi, sanctioned.	30th May No. 1,210.	....	31st Dec. 1861, No. 33 in No. 633	1276 & 1277
636& 637	Superintendent of the Govt. Press, directed to have 20 copies of Lieut. Colonel Rundall's Notes on Col. Dickens' Soane Project printed.	30th May No. 1,211.	....	None.	1277 & 1278

1 Index numbers of the Proceedings.	2 Subjects.	3 Dates of Proceedings.	4 Date of report to Secretary of State for India.	5 Numbers and dates of previous Proceedings.	6 Page.
		1862.			
638 & 639	Mr. R. C. Fraser, Probationery Engr. 1st Class, authorized to attend the quarterly examination to be held at the close of next month.	30th May No. 1,212.	....	13th Dec. 1861, Nos. 168, 169.	1278
640 & 641	Capt. Farewell authorized to come to Madras for the purpose of furnishing certain information required by the Audit Dept. for the adjustment of certain outstanding balances connected with the Wellington Barracks.	30th May No. 1,213.	....	None.	1279
642 & 643	Estimate for hanging punkahs, erecting partitions and doors, and putting up weather boarding to that portion of the Dewankhana at Chepauk which is occupied by the Office of the Secretary to Govt. Pub. Works Dept., sanctioned.	30th May No. 1,214.	....	None.	1279 to 1281

PUBLIC WORKS DEPARTMENT.

Tabular Statement of matters of routine for the month of May 1862, Government of Madras.

No.	Subject and Orders.	Date of Order.	Date of previous Orders.
1	Letter from Colonel W. I. Birdwood, Deputy Chief Engineer, Southern Circle, requesting that two months Cumulative Privilege Leave of Absence may be granted to him, dated 24th April 1862, No. 12,925. Granted.	2nd May 1862.	
2	Letter from the Chief Engineer, forwarding copy of the Budget Map for 1862-63, dated 30th April 1862, No. 13,102. Lodged...	2nd do. do.	
3	Minute by the Honorable the President, proposing Lieutenant H. M. Vibert, Acting 2nd Assistant District Engineer, *vice* Bush deceased, dated 1st May 1862. Gazetted...	2nd do. do.	
4	Minute by the Honorable the President proposing to appoint Lieutenant-Colonel J. Ouchterlony, Executive Engineer Bangalore, to act as Deputy Chief Engineer, Central Circle, during the absence of Lieutenant-Colonel Boileau, dated 1st May 1862. Gazetted ...	2nd do. do.	
5	Letter from the Commissary General Madras, forwarding for signature a receipt in duplicate for a box containing Engineer Stores, dated 28th April 1862, No. 30. Receipt returned with a remark that the Public Works Department is not aware of this transaction and that they may have been intended for the use of the Naval Engineers, and that the Deputy Commissary General Bombay, should be addressed to on the subject...	3rd do. do.	
6	Endorsement of Deputy Chief Engineer, Northern Circle, submitting the Administration Report of the Upper Godavery, for 1861-62, dated 3rd May 1862, No. 292/UGI. Report returned to the Deputy Chief Engineer, Northern Circle, for transfer to the Chief Engineer...	6th do. do.	
7	Memorandum from the Controller of Military Finance, requesting to be furnished with a copy of the Order of Government, Department Public Works, of 21st March 1862, No. 516, dated 3rd May 1862. Furnished accordingly...	6th do. do.	
8	Memorandum from the Secretary to the Board of Revenue, stating that no spare copies of the Revenue Administration Report containing reports of the Local Officers for years from 1855-56 to 1860-61, are available, dated 5th May 1862, No. 260. Lodged...	6th do. do.	
9	Letter from the Officer in charge of the Audit and Account Departments, reporting the payments made in the month of March last on account of the families of the stone cutters who proceeded to the Alguada Reef Light House, dated 3rd May 1862, No. 115. Communicated to the Accountant General, Superintendent of the Alguada Reef Light House and the Government of India...	7th do. do.	
10	Letter to the Government of India, on the foregoing subject...	7th do. do.	

No.	Subject and Orders.	Date of Order.	Date of previous Orders.
11	Letter from the Agent Madras Irrigation and Canal Company, requesting to be furnished with triplicate copies of Government Order No. 947, of the 3rd May 1862, No. 121. The Agent informed that when the order is printed the required number of copies will be forwarded...	8th May 1862.	
12	Letter from the Controller of Military Finance, forwarding letter from Deputy Chief Engineer, Central Circle, recommending an extension of sick leave to Assistant Commissary W. Arnold, dated 28th April 1862. Granted...	9th do. do.	
13	Endorsement of Deputy Chief Engineer, Southern Circle, requesting that it may be notified in the Gazette that Captain Oakes delivered over charge of Tanjore District to Captain Foord on the 16th April 1862, dated 29th April 1862, No. 13,038. Notified accordingly...	9th do. do.	
14	Memorandum from the Deputy Chief Engineer, Central Circle, requesting to send a copy of the Selection from the Records of the Madras Government, No. XI, containing Captain O'Connell's Report on the supply of water to Madras, dated 5th May 1862. Supplied accordingly...	9th do. do.	
15	Memorandum from the Government Superintendent and Controller Pier Works, forwarding an authenticated copy of a letter from the Superintendent of Marine, No. 2,426 of 29th August 1861, dated 8th May 1862. Lodged...	9th do. do.	
16	Memorandum from the Deputy Chief Engineer, Central Circle, requesting to return the plans, &c., sanctioned by Government in their Proceedings of the 29th April 1862, No. 861, for connecting the Pier with the Sea Custom House, dated 8th May 1862, No. 310. Deputy Chief Engineer, Central Circle, informed that the papers alluded to have been returned to the Chairman of the Pier Committee, to whom he should now apply.	10th do. do.	
17	Letter from the Consulting Engineer Irrigation and Canal Company, forwarding duplicate copies of the plans of the Irrigation and Canal Company's works, dated 9th May 1862, No. 7. Lodged...	12th do. do.	
18	Memorandum from the Deputy Secretary to Government, Revenue Department, requesting that bound volumes of the printed Proceedings of Government, Public Works, may be sent to his Office for transmission to Ootacamund, dated 9th May 1862, No. 87. Bound volumes of the printed Proceedings, from January to April 1862, forwarded with an intimation that three copies of Proceedings from June to December 1861, are on the records of Revenue Department.	12th do. do.	
19	Memorandum from the Chief Engineer, forwarding certain copies of plans connected with Pálár project, dated 10th May 1862, No. 415. Lodged...	12th do. do.	
20	Twenty copies of the report of the Conservator of Forests for the year 1860-61, distributed to certain Officers...	14th do. do.	
21	Memorandum from the Collector of Sea Customs, Madras, forwarding a receipt in duplicate from the Agent P. and O. S. N. Company, for one box addressed to the Right Honorable the Secretary of State, dated 12th May 1862. Lodged...	15th do. do.	
22	Memorandum from the Chief Engineer, requesting to return the original enclosures submitted with his letter regarding Mr. Mechanical Engineer Clements' claim to extra steam allowance, dated 6th December 1861, No. 8,094. Returned accordingly...	15th do. do.	

No.	Subject and Orders.	Date of Order.	Date of previous Orders.
23	Endorsement of the Chief Engineer, submitting letters from certain Officers reporting delivering over charge and resuming their duties, for publication in the "Fort Saint George Gazette," dated 14th May 1862, No. 564. Notified accordingly...	16th May 1862.	
24	Memorandum from the Secretary to Government, Revenue Department, requesting that the two large Teakwood boxes recently taken from the Government Office by the Public Works Department may be returned for packing Proceedings, &c., for transmission to Ootacamund, dated 13th May 1862, No. 91. The boxes returned with a Memorandum...	16th do. do.	
25	Letter from Chief Engineer, recommending for reasons assigned the transfer of Mr. J. Broshahan, 2nd Assistant District Engineer, from Malabar to Trichinopoly, *vice* Lieutenant Mead on other duty in Tanjore, dated 16th May 1862, No. 627. Approved...	17th do. do.	
26	Letter from the Chief Engineer, recommending that Lieutenant Smalley, may be transferred to Nellore and Lieutenant Fraser to South Canara in his stead, dated 16th May 1862, No. 626. Approved...	17th do. do.	
27	Circular from the Chief Secretary to Government, stating that it is the wish of Her Majesty the Queen that no celebration of Her Birth Day should take place this year, dated 16th May 1862. Communicated to Chief Engineer, Deputy Chief Engineers, and the Officer in charge of the Audit and Account Departments...	17th do. do.	
28	Return of the estimates sanctioned during the month of March 1862, forwarded to the Government of India, accompanied by an explanatory statement of the works estimated to cost more than 1,000 Rupees each, ordered for execution on emergency...	20th do. do.	
29	Extract from the money market review urging the importance and the advantages of tramways in connection with Railways and pointing out the places where they should be made, dated 8th March 1862. Lodged.	20th do. do.	
30	Minute by the Honorable the President, proposing Lieutenant G. E. Fryer, 21st Regiment Native Infantry, to be appointed to act as second Assistant District Engineer, North Arcot, dated 17th May 1862. Appointment Gazetted...	20th do. do.	
31	Letter from the Chief Engineer, forwarding letter from Colonel Birdwood, Deputy Chief Engineer, Southern Circle, reporting his departure on the 8th instant, on Cumulative Privilege Leave for two months, dated 15th May 1862. No. 621. Lodged...	20th do. do.	
32	Memo. from the Superintendent of Stationery stating that certain sheets of the India Atlas not having been published are not available for supply, dated 16th May 1862, No. 734. Lodged...	20th do. do.	
33	Letter from the Principal Commissary of Ordnance requesting to have the Indent for Home Despatch boxes prepared and transmitted to him in duplicate and follow a similar course in future, dated 19th May 1862, No. 1,269. Lodged	23rd do. do.	
34	Letter from the Dy. Chief Engr., Central Circle, forwarding letter in original from the Collr. of Madras, regarding the restoration of Pombel tank, dated 14th May 1862, No. 521. The above draft letter of Mr. Shubrick, the late Collector of Madras, returned to Deputy Chief Engineer Central Circle...	26th do. do.	
35	Memorandum from the Deputy Chief Engineer, Central Circle, informing that the abstract estimate regarding Pálár Anicut in North Arcot cannot be found in his		

No.	Subject and Orders.	Date of Order.	Date of previous Orders.
	Office, dated 24th May 1862, No. 944. Deputy Chief Engineer, Central Circle, requested to obtain from the District Engineer and submit copy of the above estimate for transmission to the Secretary of State for India.	27th May 1862.	
36	Memorandum from the Civil Paymaster stating that orders authorizing expenditure either from the Educational Building Fund or Public Works Reserve Fund are no longer to be sent to his Office, dated 23rd May 1862, No. 247. Lodged	27th do. do.	
37	Memorandum from the Collector of Sea Customs forwarding receipt in duplicate from the Agent P. and O. S. N. Co. for a packet addressed to the Secretary to Government of India, and acquainting that it has been despatched per Steamer "Bengal", dated 26th May 1862, Lodged...	27th do. do.	
38 A	Endorsement of the Deputy Chief Engineer Central Circle, requesting that Lieutenant-Colonel Walker's assuming charge of the District of South Canara on the 15th May 1862, may be published in the "Fort Saint George Gazette," dated 27th May 1862, No. 1,023. Notified accordingly...	27th do. do.	
38	Letter from the Secretary to the Resident Hyderabad requesting to be furnished with a Memorandum showing the sum due by the Secretary Hyderabad Department Public Works for landing and despatching a packet of Forms sent to him from Calculatta for transmission to Hyderabad, dated 23rd May 1862, No. 250. Secretary to the Resident Hyderabad informed that the Cooly paid for transmission of the above packet to Hyderabad was Rupees 10 and the same having been charged in the Contingent Bill need not be refunded...	28th do. do.	
39	Memorandum from the Government of India, requesting to be furnished with certain copies of Despatches noted therein, dated 13th May 1862, No. 1,802. Copies of such Despatches as relate to the Public Works Department forwarded, and copy of the above Memorandum sent to the Financial Railway Department for transmission of copies of such Despatches as are required from that Department...	29th do. do.	
40	Letter to the Govt. of India on the foregoing subject....	29th do. do.	
41	Letter from the Consulting Engineer Irrigation and Canal Company, requesting to be furnished with all Statements similar to the one forwarded by the Accountant General showing the sums disbursed at the Presidency, dated 24th May 1862, No. 13. Statements supplied.	29th do. do.	
42	Memorandum from the Collector of Sea Customs forwarding receipt in duplicate from the Agent P. and O. S. N. Company for a box containing packet addressed to the Right Honorable the Secretary of State for India. Lodged.	29th do. do.	
43	Memorandum from the Collector of Sea Customs, forwarding a package arrived per Steamer "Nemesis" from Calcutta, and requesting to be favoured with an acknowledgement of its receipt, dated 28th May 1862, acknowledged accordingly per Memorandum No. 88 ...	30th do. do.	
44	Proceedings Financial Department, communicating a Memorandum from the Civil Paymaster, stating that orders sanctioning expenditure from the Reserve Fund need not be communicated to him, dated 28th May 1862, No. 411. Lodged.	30th do. do.	
45	Memorandum from the Deputy Chief Engineer, Central Circle, informing that the report called for in the Proceedings of Government No. 810, dated 21st April 1862, with reference to certain complaints of the Manchester Cotton Company regarding certain works in North Canara has been submitted on the 27th instant, dated 29th May 1862 No. 1,156. Lodged.	30th do. do.	

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

For the Month of May 1862.

No. 1. Read the following Proceedings of the Madras Government in the Judicial Department, dated 23rd April 1862, No. 633:—

Requesting to place at the disposal of the Agent to Governor in Ganjam from Public Works Budget for 1862-63, Rupees 5,000 for the construction of certain roads in the Hill Tracts inhabited by certain tribes called Khond, &c., and 2,000 Rupees for the erection of three buildings in the same country for Police and Magisterial purposes.	(Vide Judicial Proceedings, 23rd April 1862, Nos. 168-169.)

No. 2. ORDER THEREON, 1st May 1862, No. 890.

1. Communicated to the Deputy Chief Engineer, Northern Circle, for information and guidance.

2. The sum of Rupees 7,000 granted in the above order will be placed at the disposal of the District Engineer, Ganjam, from the Reserve Fund of 1862-63, and that Officer will take the necessary steps in communication with the Collector to cary into effect the roads and buildings therein referred to, furnishing plans of the latter for the information of Government.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 3. Read the following Proceedings of the Madras Government in the Public Department, dated 17th April 1862, No. 466:—

Communicating letter from the Postmaster General, reporting that he has taken steps to prevent delay in the transmission of parcels to Kurnool.	(Vide Public Proceedings, 17th April 1862, Nos. 105-106.)

No. 4. ORDER THEREON, 1st May 1862, No. 891.

Communicated to the Consulting Engineer Irrigation and Canal Company, with reference to his letter, No. 97, dated 22nd March 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 5. Read the following letter from Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 28th March 1862, No. 12,056:—

SIR,

2 Letters from District Engineer, with two enclosures. Nos. 205 and 251, dated 25th November 1861, and 18th January 1862.

1. I have the honor to acknowledge the receipt of the Proceedings of Government, No. 71, dated 29th January last, and with reference to paragraph 1 thereof, I would recommend that the discretionary allowance be increased from Rupees 5,000 to Rupees 15,000, and which will then only give Rupees 30 per mile, for the repair of 500 miles of District and minor roads, in the District of Tinnevelly, for the ensuing year.

	Rs.
* Discretionary Allowance ..	5,000
From Local Fund	1,500
Total...	6,500

2. Rupees 6,500* are at present only available, as the Collector states that Rupees 1,500 only can be paid from the Local Fund after disbursing the amount for salaries and repairs, viz., Rupees 9,009-10-9 (and which appears a very large sum indeed for these two items) of the Pound Establishment. I would therefore recommend that the balance, viz., Rupees 8,500 be either sanctioned from the general allotment of the District, or from the Reserve Fund of 1862-63.

3. Paragraph 2 of the Proceedings of Government, quoted above, will be made the subject of a separate communication.

No. 6. ORDER THEREON, 1st May 1862, No. 892.

1. The Government cannot understand why so small a proportion as 1,500 Rupees only is available from the Cattle Fine fund, in aid of the discretionary allowance for minor roads in the Tinnevelly District. It was pointed out in Proceedings, dated 20th March 1861, No. 562, that under the terms of Section I, Act V of 1860, the surplus of the fines fund after providing for purposes connected with the execution of the Act " may be applied to the construction and repair of " roads and bridges and other works of a like nature." The Government would wish therefore to know what may be calculated upon as the balance available for this purpose out of the Cattle Fine funds of the Tinnevelly District. It is true that in his letter of the 15th January 1862, No. 18, to the District Engineer, Mr. Silver states that " it cannot be expected that the amount required " for the purposes of the Act relating to trespasses by cattle, which is estimated at Rupees 10,000 per " annum, will be realized every year ;" but it is easy to ascertain and report the average collections for the last three years, the disbursements for purposes connected with the execution of the Act, and the surplus available for roads, &c., during the same period.

Proceedings 29th January 1862, No. 71.

2. The Government are of opinion that the existing discretionary allowance supplemented by the Local Funds ought to suffice for the less important roads in Tinnevelly, the principal ones being amply provided for with a maintenance grant of 51,400 Rupees; but under any circumstances, as the Budget of 1862-63 does not provide for a larger discretionary allowance than 5,000 Rupees for Tinnevelly the Government cannot now increase it.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 7. Read the following Proceedings of the Madras Government in the Military Department, dated 16th April 1862, No. 1,415 :—

Approving of the plan and estimate amounting to Rupees 1,590 for underpinning the centre Pier, re-building the 1st and 3rd Piers, and repairing the abutments and wood-work of the North Ravelin Standing Bridge of Fort Saint George, as also for re-laying the Platform and Road-way over the Bridge. (Vide Military Proceedings, 16th April 1862, Nos. 382-383.)

No. 8. Order thereon, 1st May 1862, No. 893.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance. Funds for the execution of the work will be provided in the manner proposed by Lieutenant Colonel Carpendale.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 9. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 8th April 1862, No. 255, G/ 127 :—

Sir,

1 Letter from District Engineer Godavery, No. 1,877, dated 23rd February 1861.
1 Do. to do. No. 1,290, dated 6th June 1861.
1 Estimate.
1 Report.
2 Plans

1. I have the honor to submit herewith the estimate for the tunnel in the Injeram channel, Godavery District, called for in order No. 33, under date the 25th March 1862, amounting to Rupees 2,590.

Item No. 63, Rupees 2,000.

2. This amount, it will be observed, exceeds the sum allotted to the work in question in the Budget for 1862-63 by Rupees 590, owing to the necessity as pointed out by Lieutenant-Colonel Rundall when in charge of this Office, of increasing the length originally assigned to the tunnel by the District Engineer, to provide for the enlargement of the Canal for navigation purposes.

* Rupees 590.

3. The additional sum required for this work* might be allotted out of the General Reserve Fund.

No. 10. Order thereon, 1st May 1862, No. 894.

1. The estimate forwarded with the above letter is sanctioned. The sum of Rupees 590 additional to that allotted in the Budget of 1862-63, to the work in question, will be met from the General Funds at the disposal of the District Engineer for that year.

2. The Government observe that no provision has been made for excluding the river when in flood. The District Engineer's attention should be called to this point and instructions given for fixing a flap shutter or similar contrivance if necessary.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 11. Read the following Endorsement of the Acting Consulting Engineer for Railways, dated Madras, 14th April 1862.

Read the following letter from WILLIAM S. BETTS, Agent Great Southern of India Railway, to the Consulting Engineer for Railways, Madras, dated Negapatam, 10th April 1862, No. 371 :—

Sir,

I understand a new Minute of Government has been drawn up relative to the Harbour at Negapatam. Will you be good enough to furnish me with a copy of it.

Forwarded for the orders of Government. The last documents on the subject of the Negapatam Harbour received in this Office were those which accompanied Order No. 2,078 in the Public Works Department, dated 9th November 1861.

(Signed) P. O'CONNELL, Captain,
Acting Consulting Engineer for Railways.

Referred to the Public Works Department.

(Signed) T. PYCROFT,
Chief Secy. to Government.

FORT ST. GEORGE,
16th April 1862.

No. 12. ORDER THEREON, 1st May 1862, No. 895.

No. 578, dated 26th March 1862.

Ordered that a copy of the last Order of Government relative to the Negapatam Harbour be forwarded to the Acting Consulting Engineer Railways for transmission to the Agent of the Great Southern of India Railway.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No 13. Read the following Proceedings of the Madras Government in the Financial Department, dated 15th April 1862, No. 289 :—

Calling attention to the Resolution of Government of India, regarding the preparation and submission of Budgets, and urging the importance and necessity of acting up to it. } (Vide Financial Proceedings, 15th April 1862, No. 50.)

No. 14. ORDER THEREON, 1st May 1862, No. 896.

The foregoing order has been communicated to the Chief Engineer direct by the Financial Department. The attention of that Officer will now be requested to paragraph, 1 with a view to his instructing the several District Engineers to forward their Budgets in time to admit of the submission of his to Government on the 1st November of each year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 15. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 8th April 1862, No. 249 Kr 30.

Read the following letter from Major J. C. ANDERSON, District Engineer, Kistna, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Bezwada, 28th March 1862, No. 227 :—

Submitting estimates for proposed extension of Commamoor Channel.

SIR,

1. I have the honor to return the draft of your letter to the Secretary to Government No. 128, dated 21st February 1862, which you have had* the goodness to forward* for my perusal.

* With Memorandum No. 188, dated 21st instant.

2. With reference to the information called for at your suggestion in paragraph 3 of the Proceedings† of Government, as to the propriety of substituting an iron aqueduct for the masonry Calingulah proposed for construction across the Nulla Mudda, I have the honor to represent that I am quite alive to the great superiority, apart from any consideration as to cost

† No. 483, dated 19th March 1862.

of an aqueduct over a Calingulah in all cases in which it is practicable to apply it. In submitting the plan and estimate for a work of the latter kind, for passing the Nulla Mudda across the Commamoor Channel, I had taken‡ into consideration, all the peculiarities of the locality, and although I mentioned as a sufficient reason for preferring it to an aqueduct, that it would cost very much less, this was not the only reason, which led me to adopt the Calingulah in this case, when in another letter§ I submitted an estimate for an aqueduct passing the Nukkoo Vagoo, a drainage of nearly equal magnitude across the same Channel.

‡ District Engineer's letter No. 156, dated 19th November 1861.

§ No. 123, dated 19th October 1861.

3. The real objection to the construction of an aqueduct in the Nulla Mudda is the high level of its flood water and the impossibility of lowering it. The sill of the Calingulah of the Baupetla tank into which the Nulla Mudda drains itself is 15' above high water, while the head of the proposed continuation of the Commamoor Channel where the drainage crosses it, will be 12' 9" above high water. Consequently when the Baupetla tank begins to discharge, the water will stand back 2' 3" on the bed of the Commamoor Channel.

4. The floods of the Nulla Mudda rise to the level of the ground adjoining the banks or about 6 feet above the level of the bed of the Commamoor Channel, and if an Aqueduct were constructed it would hold up the flood water (the flow of which is already retarded by the high level of the tank when filled) to such an extent that I should apprehend that there would be danger of its inundating the country, and finding a new course for itself into the Ramparoo swamps.

5. I therefore cannot but think that an open Calingulah with an ample water way, considerably exceeding that of the Nulla Mudda itself, is the best method of avoiding any danger of the kind above-mentioned, and I trust you will, under the explanation I have offered, approve of its being adopted in this case.

Submitting for the information of Government a letter from the District Engineer, Kistna, as per margin,|| treating of the subject noticed in the Order of Government No. 483, dated 19th March 1862, paragraph 3, and supporting his view that an open Calingulah with a sufficient water way affords the best, in point of fact the only means of safely discharging the flood waters of Nulla Mudda at the point of its intersection with the line of the Commamoor Channel.

|| No. 227, 28th March 1862.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 16. ORDER THEREON, 1st May 1862, No. 897.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 17. Read the following Proceedings of the Madras Government in the Revenue Department, dated 15th April 1862, No. 845A :—

Communicating Telegram from the Government of India ordering that the transfer of North Canara to Bombay will take effect on the 15th April 1862. (Vide Revenue Proceedings, 15th April 1862, Nos. 254A-254B.)

No. 18. ORDER THEREON, 1st May 1862, No. 898.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 19. Read the following Proceedings of the Madras Government in the Military Department, dated 16th April 1862, No. 1,413:—

Declaring that the promotion of Soldiers who were serving in the Public Works Department prior to the 11th January 1861 does not debar them from the benefit of the protective order of the 4th October 1861 No. 3,590, and referring for the opinion of His Excellency the Commander-in-Chief, the question of obviating the supercession by their Regimental Juniors of men of the Sappers and Miners placed on the Effective Supernumerary list.	(Vide Military Proceedings, 16th April 1862, Nos. 378 @ 381.)

No. 20. ORDER THEREON, 1st May 1862, No. 899.

Communicated to the Chief Engineer and to the Deputy Chief Engineers, Northern, Southern, and Central Circles, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 21. Read the following Proceedings of the Madras Government in the Financial Department, dated 23rd April 1862, No. 304:—

Communicating a Despatch from the Home Government, relative to a representation made by the Government of India, that Stores of the value of 13 lacs had been consigned to Madras Presidency, which had neither been expected nor required.	(Vide Financial Proceedings, 23rd April 1862, Nos. 76-77.)

No. 22. ORDER THEREON, 1st May 1862, No. 900.

Communicated to the Chief Engineer for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 23. Read the following Proceedings of the Madras Government in the Marine Department, dated 16th April 1862, No. 105:—

Sanctioning the estimate for a small Godown for the Stores of Santapilly Light House and for other improvements.	(Vide Marine Proceedings, 16th April 1862, Nos. 37-38.)

No. 24. ORDER THEREON, 1st May 1862, No. 901.

Communicated to the Acting Deputy Chief Engineer, Northern Circle, for information and guidance. The work will be carried out from the General Funds of the Vizagapatam District for 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 25. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 7th April 1862, No. 244, Kr 105.

Read the following letter from Major J. C. ANDERSON, District Engineer, Kistna, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Bezwada, 26th March 1862, No. 225:—

SIR,

1. Referring to copy of Proceedings of Government forwarded with your Memorandum No. 190|M 43, I have the honor to report that the remarks of Government on the small expendi-

ture on the High Level Canal from the Budemair to Perikeed, must have been made under misapprehension of the condition of the work with regard to amount sanctioned for its execution. The amount of the estimate in this portion of the Canal, the execution of which alone pertains to the Officers of this District, is Rupees 79,550. The expenditure to end of last official year was Rupees 77,503, so that the balance available for expenditure during the current year was only Rupees 2,047. The actual expenditure* has been more, owing to the sum of Rupees 2,753 being rendered available by recoveries, chiefly by the transfer of two boats valued at Rupees 1,846-12-2.

G. O. No. 1,063, dated 6th May 1859, communicated with Superintending Engineer Northern Circle's Memorandum No. 344, dated 11th May 1859.

* Up to end of February 1862.

2. For further information regarding the state of this Canal and the additional works which I consider necessary to complete it in a proper manner, I would beg to refer you to my letter No. 67, dated 30th July 1861, to the address of your predecessor.

3. The amount allotted in the Budget of this year for this Canal for the whole of the distance from the Budemair to Dendaloor is 62,806 Rupees, but of course I had no power to expend more on the portions of the Canal from the Budemair to Perikeed than was provided for in the estimate for it.

4. The Order referred to in paragraph 5 of the Proceedings of Government above quoted has not been received in this Office.

Submitting to Government No. 225 of 26th March from the District Engineer, Kistna, with reference to Order of Government No. 497, dated 20th March 1862.

1 Letter from District Engineer Kistna, No. 225, dated 26th March 1862.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 26. ORDER THEREON, 1st May 1862, No. 902.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 27. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 2nd April 1862, No. 232/G 103 :—

SIR,

1. I have the honor to submit herewith for the information of Government the Irrigation Register of the (late) Rajahmundry District, since transferred as the "Godavery," for the period of five years included between Faslis 1261 and 1265 (1851 and 1855), referred to in the Orders of Government noted in the margin.*

1 Letter from District Engineer Godavery, No. 1,371, dated 8th March 1862.
1 Irrigation Register.

* E. M. C. No. 1,181, dated 18th June 1857.
E. M. C. No. 1,613, dated 1st July 1859.
E. M. C. No. 2,037, dated 22nd August 1859.

2. In framing the Register the Orders of Government of 5th November 1861 and 1st July 1859, Nos. 2,032 and 1,613, have unfortunately not been attended to with entire strictness,

Inasmuch as the villages have not been entered consecutively in the order of their numbers. As however much time would be consumed if the whole were re-written, I trust Government will be pleased to overlook this departure from their wishes.

3. The District Engineer, Godavery, represents that should Government approve of the Register in its present form, "stitched," it can be bound as soon as it is desired that it should be so fitted.

4. The Register for Faslis 1266—1270 is stated to be under preparation, and its early transmission is promised.

No. 28. ORDER THEREON, 1st May 1862, No. 903.

1. In consequence of the time and labour which the re-copying of the Irrigation Register of the late Rajahmundry District, submitted with the above letter, will entail, owing to a departure from the orders of Government in its preparation, the Government pass it specially, and hope that the Register for the period between Fasli 1266—1270, which is reported to be now under preparation, will be correctly framed and submitted.

2. The Government are of opinion that the preparation of the Register might be somewhat simplified by scoring out the words " Assessment including" in column 12 and showing in that column the amount of " Fassal Jasty" only. The Chief Engineer will issue instructions accordingly to all the Collectors and District Engineers in order that they may adopt the alteration pointed out in the Registers now under preparation.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 29. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 12th April 1862, No. 12,610.

Read the following letter from Captain A. D. CLAY, First Assistant District Engineer, in charge of the Salem District, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Salem, 5th April 1862, No. 265:—

SIR,

1. I have the honor to bring to your notice that the Agent for Remounts informs me, that the windows provided for in the sanctioned plan and estimate, for rebuilding and enlarging the Gram Godown at the Remount Depôt, are not required, and he therefore requests they may be dispensed with.

2. These windows are eight in number and measure 2×2 feet each, and are rated at Rupees $5\frac{1}{4}$ each in the estimate. If these windows are closed up, $1\frac{3}{7}$ cubic yards of brick work will be added to the amount allowed for in the estimate, and will cost Rupees 6-10-8 at the estimated rates, this alteration will therefore cause a decrease of Rupees 35-5-4.

3. The Agent also wishes for a small trap door, 4×3 feet, over the entrance door, so as to admit of the building being completely filled with gram. The cost of this trap door will be Rupees $17\frac{1}{2}$.

4. I have not stopped the work, and therefore I have the honor to request your early sanction to the proposed alterations.

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1. Submitted for the information of Government.

2. Under the authority granted in paragraph 8, Section II, Chapter IV of the New Code, the Deputy Chief Engineer Southern Circle approved of the alterations proposed in the foregoing letter.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

1 Original letter No. 265, dated 5th April 1862.

No. 30. ORDER THEREON, 1st May 1862, No. 904.

1. The Government do not understand the arrangement of placing a trap door over the entrance door of the Gram Godown so as to admit of the building being completely filled with gram. It is not apparent how the building is to be ventilated without windows of any kind.

2. No mention is made either in the District Engineer's letter or in the Deputy Chief Engineer's Endorsement of the date of the Proceedings of Government sanctioning the plan and estimate for the Gram Godown, and it is impossible therefore to say what estimate is referred to. This omission will now be supplied.

3. The Deputy Chief Engineer, Southern Circle, will also explain whether the Agent countersigned the plan sanctioned by Government, and if so, he will ascertain how it is that Officer now proposes to make alterations therein.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 31. Read the following Endorsement of the Officer in charge of the Audit and Account Departments, dated Chepauk, 7th April 1862, No. 12,393.

Read the following letter from Major SHAW STEWART, Acting District Engineer, Vizagapatam, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Waltair, 13th March 1862, No. 1,470:—

SIR,

No. 1,281. 1. With reference to my letter of the 17th ultimo, I have the honor to submit the following explanatory remarks in reply to your Memorandum* as per margin.

* No. 9,724, of 23rd January 1862.

2. The repairs referred to in paragraph 2 of Government Order No. 2,500, of 31st December 1861, consisted of the following items, viz. :—

	RS.	A.	P.	
Repairs to the floor at a cost of	304	8	0	The substitution of cut stone for jelly in chunam.
Do. to the roof...	18	0	0	Shifting and relaying a portion of the tiles of the roof and renewing some.
Do. to the walls	28	0	0	Repairing the cracks in the partition wall of the Master Attendant's Office and the parapet wall of the porch by tying them (walls) together with iron rods.
Do. to the back and front gates	11	0	0	Supplying one or two iron hinges.
Extra establishments	18	8	0	
Total......	380	0	0	

3. The Sea Custom House was not built by this Department, but by a man named Chintacayala Tummiah, to whom the contract was given by the Collector. It was completed in 1858-59.

4. The substitution of cut stone in the floor of the building was recommended by Captain Blagrave, the then District Engineer, to save frequent repairs, as the original floor was not calculated to bear the heavy traffic to which it was constantly subjected.

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1 Original letter No. 1,470, dated 13th March 1862.

Submitted to Government with reference to paragraph 2 of their Proceedings, dated 31st December 1861, No. 2,500.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In charge of the Audit and Account Departments.

No. 32. ORDER THEREON, 1st May 1862, No. 905.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 33. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 15th April 1862, No. 12,711.

Read the following letter from Captain W. FAREWELL, Executive Engineer, Wellington, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Neilgherries, 3rd April 1862, No. 260:—

SIR,

With reference to Extract from your Proceedings No. 11,916, under date the 25th March 1862, I have the honor to report for the information of the Chief Engineer and Secretary to Government, that the estimates for the pipe drainage of the Barrack roofs at Wellington, was sanctioned by Government on the 18th of August 1857, and the amount entered in the Budget List of 1861-62, under the head of "Drainage of Barrack roofs" was applied for with the view of completing the roof drainage, which was only commenced last year, but as it was desirable to postpone the remaining portion of the roof drainage, till the stone work of the Barrack square drainage was completed, which it will be in the middle of the next official year, the roof drainage piping required was not sent for; I would however note that I asked; for permission to obtain the pipes in January 1862.

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1 Original letter No. 260, dated 3rd April 1862.

* Rupees 14,030.

† Item 32.

‡ Do. 19.

1. Submitted for the information of Government with reference to their Proceedings No. 501, dated 20th March 1862.

2. The estimate* for the drainage of Barrack roofs at Wellington was sanctioned in Extract Minutes of Consultation, No. 1,599, dated 18th August 1857, the amount was entered in the current year's Budget,† and has been entered in that‡ for the ensuing year, under the head "drainage of Barrack roof."

3. The completion of the *roof* drainage was deferred until the stone work of the Barrack square drainage was finished, (which will be in the middle of 1862-63) and Captain Farewell reports that the piping required for roof drainage was therefore "not sent for."

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 34. ORDER THEREON, 1st May 1862, No. 906.

The Government decline sanctioning Captain Farewell's proposal to obtain from England, through Messrs. Jennings & Co., the cast iron pipes required to complete the roof drainage of the Barracks at Wellington, and direct that the course laid down in the Honorable Court's Despatch to the Government of India, dated 8th November 1855, No. 83 (printed at page 129,

C. O. Book), be observed in this and in all similar cases. Captain Farewell should furnish an Indent with full description, and also a drawing of the pipes required, for early transmission to the Secretary of State for India.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 35. Read the following letter from Major H. W. RAWLINS, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 27th March 1862, No. 12,003 :—

SIR,

1. In forwarding herewith the usual three Statements of expenditure in the Public Works Department during the month of January last, I have the honor to submit the accompanying four letters* and a Memorandum explaining the cause of the delay in the submission of the accounts for that month, and a fifth† explaining the cause of the large cash balance shown to have remained with Lieutenant Irving at the close of the month.

* 1 Letter from District Engineer Salem, No. 231, dated 17th February 1862.
1 Do. do. South Canara, No. 203, dated 17th February 1862.
1 Do. do. North Canara, No. 201, dated 21st February 1862.
1 Do. do. Upper Godavery, No. 423, dated 21st February 1862.
1 Memorandum do. do. Tanjore, dated 24th February 1862.

† 1 Letter from District Engineer, Vizagapatam, No. 1,276, dated 15th February 1862.

2. The following table shows the dates on which the accounts above referred to were received in this Department, as also others which came in late, regarding which no explanations of delay have been received.

3. The Accounts from Upper Godavery for January have not been received as yet.

Month.	Districts.	Date of Account Current.	Date of receipt in the Audit Department.
January	Salem	February 19th	February 24th
	South Canara	do. 17th	do. 25th
	North Canara	do. 25th	March 7th
December 1861	Upper Godavery	do. 24th	do. 8th
January	South Arcot	do. 17th	February 24th
	Bellary	do. 17th	do. 24th
	Madras	do. 20th	do. 25th
	Bangalore	do. 19th	do. 25th
	Cuddapah	do. 17th	do. 25th
	Tanjore	do. 24th	March 4th
	Tinnevelly	do. 23rd	do. 4th
	Vizagapatam	do. 18th	do. 4th
	Madura	do. 26th	do. 6th

(Signed) H. W. RAWLINS, Major,
In charge of the Audit and Account Departments.

No. 36. ORDER THEREON, 1st May 1862, No. 907.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 37. Read the following Proceedings of the Madras Government in the Revenue Department, dated 25th April 1862, No. 892:—

Sanctioning the arrangement proposed by the Collector of Malabar for taking care of the Sholakel Bungalow and ordering the two Peons now employed there to be dispensed with. (Vide Revenue Proceedings, 25th April 1862, Nos. 344-345.)

No. 38. ORDER THEREON, 2nd May 1862, No. 908.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 39. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 19th April 1862, No. 12,824:—

SIR,

1 Memorandum from Deputy Chief Engineer, dated 4th April 1862, No. 12,321.
1 Letter from District Engineer Madura, dated 25th March 1862, No. 1,738, with one accompaniment.

1. I have the honor to submit for the orders of Government the accompanying papers from the Deputy Chief Engineer, Southern Circle, on the subject of an application made by Lieutenant Coningham for promotion to the grade of 2nd Assistant District Engineer.

"Fort Saint George Gazette," dated 13th September 1861, page 835.

2. Lieutenant Coningham was appointed in September 1861, to act as 2nd Assistant District Engineer in the place of Captain Hankin, Officiating as Superintendent of Operations at Paumben *vice* Major Gib, and as he did not join his appointment until the 2nd November 1861, he is not, under the rules of the service, entitled to the full salary of his appointment till the 2nd of May next. Considering, however, that Major Gib was permitted to retire from the service on the 31st December 1861, and that his full Civil salary Rupees 200, has, in consequence, been available from the day following, and that under the Proceedings of Government, dated 19th October 1861, No. 1,926, the appointment of Superintendent of Operations at Paumben was merged in that of the 2nd Assistant District Engineer in charge of No. 3 Range, in the Madura District, to which Captain Hankin stands appointed the other Second Assistantship is available for Lieutenant Coningham of the Engineers, whom I have therefore the honor to recommend shall be appointed thereto on a salary of Rupees 150 per mensem from the 1st January 1862 to complete the establishment.

Vide "Fort Saint George Gazette," dated 17th December 1861, page 478.

No. 40. ORDER THEREON, 2nd May 1862, No. 909.

The Government assent to the recommendation of the Chief Engineer. Lieutenant Coningham's appointment as 2nd Assistant District Engineer Madura, with retrospective effect from the 1st January 1862, will accordingly be notified in the "Fort Saint George Gazette."

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 41. Read the following letter from Lieutenant-Colonel A. D. TURNBULL, Superintending General of Irrigation North Western Provinces, to the Secretary to Government, Punjab, dated Roorkee, 4th September 1861, No. 1,901 :—

SIR,

1.—I have the honor to forward herewith for submission to His Honor the Lieutenant Governor, my report on the operations of the Western Jumna Canals for the year 1860-61, with appendices as follow :—

1.—Statement showing land irrigated and water rent levied in the various Districts of the Western Jumna Canals during 1860-61.

2.—Comparative abstract of income and current expenditure for Rubbee 1859-60 and 1860-61.

3.—Comparative abstract of income and current expenditure for the years 1859-60 and 1860-61.

4.—Statement showing area of cultivation and amount and value of produce on lands irrigated during 1860-61.

2. I regret that I am unable to accompany this Report with the Annual Statement of remunerative works as I am most anxious to adjust the outstanding balance against original works, by bills, which cannot be prepared or submitted till completion Survey reports reach me. The expenditure on *works* as shown in my Progress report differs slightly from that given by Captain Glover in the accompanying Statement, as his calculations for materials expended on works vary in a few instances from those adapted by the Central Office, but the totals in either case are approximately correct, and will answer all purposes, till such time as the *exact* sum is shown in my Statement of remunerative works, which will be submitted at the earliest possible date.

No. 4,471.

Copy of above forwarded to the Secretary to Government, Madras, for information.

(Singed) G. NEWMARCH, Lieut.-Colonel,
Asst. Secy. for Secy. to Govt., Punjab, P.W.D.

Lahore, 5th February 1862.

Report on the operations of the Western Jumna Canals, during the year 1860-61.

1. The Report of operations of this Canal during the last year, may be peculiarly interesting at the present time, when from the failure of the periodical rainy season, the suspension of all cultivation over an immense tract of country in the Punjab and the North Western Provinces has immersed thousands in the horrors of famine, which visitation has been averted by this canal over an area of about 4,500 square miles through which it flows, and which tract, from the produce it has been enabled to rear, has been the means of mitigating the evil in no inconsiderable degree in its own immediate neighbourhood.

2. The amount of rain which fell during the last year was only 16·51 inches according to the Register kept at Dadoopoor, at the head of this canal, which amount is less than has been recorded during any year, since 1834, at which date the register commences. The largest recorded fall of rain was in 1856, when 60·75 inches fell, but the average quantity is about 40 inches, so that not more than between one-half and one-third of the usual quantity has fallen this year. There are two other years of failure of rain recorded, viz., in 1837, when 22·25 inches only fell, and 1848, when 20·68 inches fell, but it will be seen that they are neither so small as the last year's fall. Both these years were famine years, or years in which great distress prevailed, and it is a fact worthy of note that the dearth which periodically visits this country appears to be increasing in intensity, or, in other words that the recurring period of such visitation shows a les amount of rain fall than the preceding one showed.

3. It may be found also that the river supply will be similarly affected, and that the periodical deficiency of rain will be accompanied by a decreased volume in the rivers. The supply of water in the Jumna was particularly small during the last year, its surface being much lower than was ever known by any one residing in its vicinity. Captain Glover almost immediately after assuming charge of these canals, finding the supply failing, and having had his attention drawn to the subject, ascertained the discharge of the Jumna on the 1st February 1860, to be 2,854 cubic feet per second from actual measurement. It was determined by Colonel Abbott in February 1849, to be 3,488 cubic feet. In November 1860, Captain Glover again measured the discharge of the river in conjunction with Major Brownlow, Superintendent Eastern Jumna canal, and found it to be only 2,570 cubic feet, at that early period of the season, and it subsequently fell very considerably, but owing to his presence being required on other parts of the canal he was unfortunately unable to make any more measurements at the season of lowest supply, which would have determined the minimum discharge on record. Captain Glover does not think, however, that it could have exceeded 1,900 cubic feet per second in March 1861, which according to his judgment allows 1,250 cubic feet as the discharge of the Western Jumna, and 650 cubic feet for that of the Eastern Jumna canal at that time.

4. As the irrigation of this, as also of the Eastern Jumna canal, has extended very considerably of late years, and the amount of water carried by each has been consequently increased, and as the river invariably fails in affording a full supply to each canal according to the present standard, the measurement of the river becomes an important object, and Captain Glover recommends that the discharge be ascertained annually about February and recorded. Such measurements would doubtless be valuable, and, I shall, in future years, endeavour to obtain them, but as the work at the heads is generally over by the month of February, and the Superintendent is visiting other portions of the canal where his presence is urgently required during this month, he may not often be able to make them.

5. The proportion of the river's supply due to each canal has been a source of considerable difficulty for some years, and rules have been laid down from time to time regulating the division, but as the supply in each canal was due, above certain limit, to the exertions of the individual establishments, it followed that a constant straining arose to benefit one canal at the expense of the others, leading to increased and unnecessary expense without any corresponding benefit to Government, as any gain on the one was counterbalanced by a loss on the other. During the last year, therefore, finding the supply likely to fail to an unprecedented extent, Major Brownlow and Captain Glover agreed to a mutual scale of regulation; any fall in the supply of one canal being adjusted by a corresponding decrease of supply in the other. As there were no correct returns of the respective discharges of the two canals at different heights of water surface, these officers were obliged to arrive only at a rough conclusion, but it has been found to work very well, and owing to the low state of the river it may be considered to have had a fair trial. By the present agreement the regulation is left in the hands of the Eastern Jumna canal establishment, who, by opening their escape dam at Fyzabad, are enabled to send down more water to the lower heads of the Western Jumna, and thus increase the supply if requisite; reports of the height of water in each canal are exchanged daily by the officials entrusted with its regulation, and according to these reports the supply in the Eastern Jumna canal is either increased or lowered, every fall of one inch of surface below full supply in these Canals being met by a fall of 2 inches on their gauge.

6. The gauge at Dadoopoor, with full supply in the canal, stands at 4 feet 4 inches, showing a discharge of 2,544 cubic feet per second, but during a great part of January and February last, the gauge only showed 3 feet one inch, and during the latter part of February, and first half of March, it fell even to 2 feet 10 inches, so that Captain Glover calculates that during the very height of the Rubbee crop the discharge of the canal was not more than one-half its full amount. The failure of supply moreover commenced unusually early, about the middle of October, and no increase took place till the middle of April, so that it will be seen that during the most important crop of the year the supply has been most lamentably deficient.

7. During the last year the extension of irrigation has been very great, no doubt caused by the demand for water consequent on the failure of the periodical rainy season. Cultivators had been attracted in very large numbers from all the surrounding districts to the various villages which have been in the habit of using canal water, every available spot in each village had been rented in order to rear a small crop for the support of their families, moreover owing to the great drought many plots which formerly were mere swamps had dried up, and advantage was taken to put them under cultivation so that crops were raised in places where none had been seen for many years.

8. The benefits of the canal have been felt to a very great degree in 695 villages, bordering its course, and situate in the districts of Umballa, Thaneysur, Kurnaul, Delhi, Rohtuc, Hissar, and the independent territory of Jheend. The total amount of land brought under cultivation, and for which irrigation has been afforded from the canal during the past year is the large number of 7,33,267 beeghas, or about 730 square miles, scattered over area of about 10 times that extent, estimating the sphere of irrigation to extend on an average about 5 or 6 miles in width on each side of the canal throughout its whole length.

9. The amount of irrigation during the Rubbee crop was 4,62,377 beegahs, and Captain Glover calculates that the discharge of the canal during a great part of the time did not exceed 1,250 cubic feet per second, so that we are enabled to arrive at a close approximation of the amount of land that can be irrigated by one cubic foot of water per second for one crop, which in this case is about 370 beegahs, a fair conclusion and sufficiently accurate to serve as a basis for future calculations. Captain Glover proposes to ascertain the discharge of this canal for every decrease of one inch in height of surface, in the hope of being able annually to calculate the value of a cubic foot of water, and to ascertain whether it has been employed to the full advantage by comparison with former years.

10. In addition to the water-rent there are other sources of revenue on the canal, consisting of mill rent, fees on navigation, and rafting of timber, and sale of canal produce, each of which Captain Glover notices as follows:—

"The mill rent is levied by letting out the corn mills constructed in the city of Delhie and "town of Hansie, the revenue from this source has, however, fallen off this year on account "of the great demand for water for the more important object of irrigation not admitting of a "constant supply being sent into the city of Delhie where it is employed as a motive power for "these mills, and afterwards allowed to run to waste into the Jumna. At Hansie the demand "for the use of the mills has declined considerably of late years since the breaking up of the "Military Cantonments there."

"Fees are levied agreeably to the scale laid down in the *Government Gazette* of 1st July "1845, on all timber which is rafted down the canal from the forests, where it is cut in the hills "near the banks of the Jumna; the amount realized on this account has, however, fallen off "very considerably of late years owing to the exhaustion of these forests, the extent of which "may be inferred from the fact that sal timber of larger scantling than 6 inches square, and that "only in small quantity, is not now procurable at Dadoopoor near the head of the canal "whereas formerly the largest timbers were obtainable there. On a late occasion I was obliged "to send to the Ganges, a distance of 40 or 50 miles, for timber which was required for the use "of the canal."

"The revenue realized by the sale of canal produce is very precarious, and varies con-"siderably in amount, it is derived from the sale of timber and grass grown on the canal "banks."

"Fines are inflicted for the infringement of Canal regulations, and credited to Government. "I have, however, endeavored to decrease their amount as much as possible, but in a year like "the last when water was worth its weight in silver, the crime of water stealing became more

"than usually frequent, so that I was not able to reduce the amount of the fine account so much "as I could have wished, but I think that the total sum levied under this head is very moderate. "The total of the fines levied last year amounted only to rupees 5,424-4-8, of which rupees "249-1-0 were inflicted on the canal establishment, so that rupees 5,175-3-8 only are due to the "breach of Canal regulations, and are spread over 695 villages, giving an average of rupees "7-7-1 only to each."

"Water rent is levied on the actual area irrigated, and is assessed at different rates according to whether the water is capable of flowing naturally over the ground irrigated, or whether "it is raised artificially. The crops usually grown are divided into two classes and are charged "at different rates according to their classification, the amount of water rent per beegah, under "different circumstances, being laid down in the *Government Gazette* North Western Provinces, "1st July 1845."

11. The total amount of water-rent is determined twice annually at the expiry of each half-yearly crop, and is ascertained by the actual measurement of each field irrigated. These measurements are made under the superintendence of 3 darogahs, or superior officers, assisted by a staff of moonshees and chainmen. Formerly a great number of villages took water by paying a certain fixed sum, according to the number and sizes of their water courses, but these contracts which were made in 1840, for a period of 20 years, expired at the commencement of the past year, and as Captain Glover did not wish to renew them without thorough investigation, he has been obliged to measure all lands irrigated during this year, which has greatly increased the amount of work. In 1859-60, when contracts were in operation, the area of land to be measured amounted to 296,252 beegahs only, and this was much in excess of ordinary years, whereas in 1860-61 it amounted to 733,267 beegahs; in consequence of this great increased area, Captain Glover was obliged to entertain some extra ameens and chainmen for a few months. The total cost of the measuring establishment for the year 1860-61 amounted to rupees 6,078-2-8, giving a cost for measurement of rupees ·0082, or about $1\frac{1}{2}$ pies per beegah, or 1·37 rupees per cent. on actual total amount of water-rent collected.

12. Owing to the great increase of area to be measured, great delay has occurred in completing the measurements of irrigated areas. The establishment commenced their field operations in September, which was very early in the season, and when they suffered much from fever; the last measurement not being completed till the end of June, during the whole of which period they have been solely employed in measuring the irrigation. Captain Glover had the subject of expediting the measurements constantly under his consideration; and early in the year recommended that the village field Maps or Shurjrahs should be made use of, and authority was obtained for copies to be made of them for the use of this department. In these maps each field is marked and numbered, and the area is ascertained from other documents kept by the village accountant or putwarrie; it appears, however, that the maps now in use in the greater part of the districts through which the canal flows are very old, and were made at the time of the settlement some 20 years ago, since when considerable changes have taken place in the distribution of land, and the boundaries of the fields, so that in most cases these maps are useless for the purpose to which he proposed to put them. In the Hisser district however a new settlement is now being made, and new maps are being prepared in the Rohtuc and Delhi districts also. I believe many of the maps were destroyed in 1857, so that new ones are required and are now being made. Captain Glover proposes therefore as soon as they are completed to obtain copies from the district officers, and trusts no difficulty may then be experienced in introducing the new system. By the old plan each moonshee was accompanied by a chaining party, and he was only able to measure and calculate the contents of about 200 beeghas daily in the Khureef and 300 beegahs in the Rubbee, but by the new system nearly all chaining and calculation will be avoided, and he will merely have to walk over the ground with his map in his hand, taking down the numbers of the fields irrigated and the nature of the crops, and on his return to his tent in the evening, he will, by looking at the Khusrah or Index, be able to ascertain the area of each field. Captain Glover calculates therefore, that he will be able to do from 800 to 1,000 beegahs daily, which will reduce the time or measurement to between 2 and 3 months only annually. During the last year Captain Glover attempted to introduce this system by using

the Collectory maps, but owing to the changes that had taken place which have been before referred to, in the boundaries of fields, and the want of acquaintance on the part of the establishment with maps, he did not succeed as he had wished, but he intends to keep the Darogahs and Moonshees hard at work during the recess between their working seasons in learning the construction of maps of this description and also the use of the plane table, and he trusts that with a little practice they may be able to introduce the system as soon as the new maps may be ready in the different districts, should it be found practicable to use these village field maps, and that the annual measurement of irrigation is expedited to the extent anticipated. Captain Glover is of opinion that the system of measurements of actual area of irrigation is the fairest mode of levying a water tax that can be introduced and in this opinion I entirely concur.

13. The total income of the canal from all sources for the past year amounts to Rupees 463,344-9-2 being an increase of Rupees 97,010-8-4 above the greatest revenue yet realized since the opening of the canal. The expenditure for maintenance, repairs, and establishment for the year amounts to Rupees 205,752-2-11 or 44·4 per cent. on the revenue; so that net revenue after deduction of all charges amounts to Rupees 257,592-6-3, which is not far short of the gross income of ordinary years, a most gratifying result when it is considered that during a great portion of the most important crop, the volume of water was but little more than half of the full supply of the canal, and proving I think most clearly that the water has been turned to the utmost account during this year of drought and famine.

14. Since the opening of the Canal in 1821, the total expenditure incurred in construction and improvement has amounted to Rupees 16,84,624-13-2 and the net profit derived by the Government after repaying its original cost, and deducting the amount of the annual expenses of maintenance and establishment, has amounted to Rupees 37,75,895-15-9, so that this Canal has actually repaid 325 per cent. on the original outlay, and the profit returned to Government for the last year in direct taxation amounted to 18 per cent. on the capital invested. This does not, however, represent one tithe of the indirect benefit accruing to Government from the increased land tax, and the general improvement in the prosperity and wealth of the country.

15. The total value of staple products of the Canal irrigation will be seen from the return annexed, vide Appendex, and Captain Glover estimates it at no less a sum than 312¾ lacs of Rupees or upwards of 3 millions of £ sterling, the whole of which we may fairly assume would have been lost to the country in a year like the last, had it not been for the influence of these Canals. I think Captain Glover's estimate is somewhat high when we consider the vast space over which, and the inferiority of much of the land upon which, these crops are raised, and I would reduce their value to about 2½ or 2¾ millions of £ sterling, a sum sufficiently large to show the enormous advantages derived by the community from these Canals in a famine year. The amount of grain affording food for man thrown into the market amounts to 72,51,685 maunds; and allowing a man to consume 1 seer daily, the Canal will have raised sufficient food to support about 8,00,000 of people for one year; or, allowing 2lb. to a man and child, will have kept at least 12,00,000 of people alive for the same period, to say nothing of the fodder thus obtained for the cattle. These facts speak for themselves, and serve to show the importance to the country of even so primitive a canal as this. But when it is shown that the Government can combine a benefit to the country with actual gain to themselves by establishing works of irrigation it is to be hoped that the subject may receive the great attention which it undoubtedly deserves.

16. Among the more valuable products may be observed, sugar, which has been grown to the value of nearly 30½ lacs of Rupees, Indigo 55,991 Rupees, and cotton upwards of 20 lacs of Rupees. With reference to that last named, I may mention that some improved description of seed have been kindly furnished to me by Mr. L. Berkeley, Extra Assistant of the Delhie division, forwarded on to Captain Glover who will distribute them amongst the Zamindárs for sowing during the present season, and will forward specimens of their produce when the crops shall have arrived at maturity. Captain Glover thinks it may be worthy of consideration, "whether with the increased facilities of transport afforded by the Railroad now rapidly "approaching Delhie, advantage might not be taken of a means of irrigation such as the canal "guarantees to establish a large cotton growing country in this neighbourhood; the subject "might be worthy, the attention of those interested in it."

17. To show the benefits conferred by the canal on individual communities, Captain Glover instances the village of Bhutgaun in the Soneput district where the area of land under rice cultivation, amounted last year to 3,094 beegahs, yielding an estimated outturn of 46,410 maunds which, supposing it sold at the rate of 12 seers to the Rupee, bears a money value of upwards of 1½ lacs of Rupees for this one village alone; and for which the amount of water rent taken by the canals amounts to the inconsiderable sum of 2,469 Rupees or 16 per cent. only on the value of crop.

18. It is a most remarkable fact which should be well remembered, that this village of Bhutgaun was the first, and foremost among the three villages which petitioned the Commissioner in the previous year to have the Canal stopped, in consequence of the supposed loss which they had sustained by it from over saturation in ordinary seasons. There is no doubt that this village suffers from supersaturation for five out of six, or, perhaps six out of eight years, but a remission of the land revenue has been made to it on this account, and in ordinary years therefore its gains are not nearly such as have been shown above. But when the moist land is rendered fit for cultivation by drought, and the rates at which grain sells are high, as they are always in a season like the last, the village profits accordingly, and I believe last year was enabled to pay off debts which had been hanging over it for many years past. The case of Bhutgaun is not solitary, but many villages on the Canals have similary profited by last year's increasted produce and enhanced prices.

19. Of late years a white efflorescence commonly called by the Natives "Rêh" but whose chemical name is Sulphate of Soda has been observed to make its apperance in the neighbourhood of the Canal, rendering the land on which it is observed, quite unfit for cultivation. The subject has received considerable attention from time to time, but no remedy of practical value has apparently been adopted. Captain Glover considers "that this salt exists in the ground itself "but having a great antipathy to damp, it has in order to escape, forced itself to the surface, as "the height of the water level of springs has been raised by the influence of the Canal; and "that the only real remedy is to provide complete surface drainage, so as to allow the water "during the rainy season to flow off readily, washing the soil and carrying away with itself this "efflorescence, by which means the supply would in course of time become exhausted. This "however is a very difficult and expensive operation and must be the work of time."

20. Mr. Edward Brandreth the Commissioner of the Delhie Division writes as follows on the subject: "In Mr. Sherer's report; the injury to the land is principally ascribed to the salt "being brought near the surface from below, where it has always existed, by the raising of the "springs. This theory no doubt accounts for a good deal of the damage which has been, sustained, "but there are other parts that have been injured by "Shor" where the springs are so deep especi- "ally in the neighbourhood of Delhie where the canal is very shallow, that the origin of the saline "efflorescence cannot be accounted for in this way. In these cases it is to be attributed, it appears "to me, to excessive irrigation, the soil is damp for several feet below the surface, and its mere "dampness is sufficient to cause the salt to rise to the surface. Saltpetre, in the same way, may "often be observed to get into the lower parts of the walls of houses, especially in damp "situations."

21. I believe myself that the causes of the appearance of this destructive salt, are the great height of canal supply above the level of the country, and defective drainage due to obstructions formed by the ill-constructed water courses which cover this tract, and, therefore, that lowering the bed of the canal, placing the water's surface under soil, where now it runs far above soil, a re-distribution and a re-alignment of the numerous water courses which are led off from this line, added to careful and proper arrangements for passing off surface drainage under them, will either entirely remedy or at all events arrest the progress of the evil; and in reference to Mr. Brandreth's remark, "that there are other parts that have been injured by "Shor" especially in the neigh- "bourhood of Delhie," I would observe that however much these parts may be affected now, and may be suffering from the injurious effects of "Shor," many of the lands in the lower part of the Delhie canal, from below Gungatowlee, on both sides of it, and especially in the neighbourhood of the Nujufgurh jheel have much improved of late years; lands which in my recollection bore only the most scanty crop, have of late years yielded crops far above the average.

22. The keekur or *Mimosa Arabica* being well known as a most hardy tree, common in that part of the country, and capable of growing in land infected to a certain extent with "Rêh," Captain Glover recommended that plots of waste land should be taken up enclosed and sown with the seeds of this tree, and the Government has accorded sanction to the experiment being made on a small scale.

23 One of the great difficulties in establishing the Railroad between Delhie and Lahore is the great want of fuel existing along the whole line, and if therefore we can succeed in sowing this tree in large quantities at a trifling expense, we should be rearing a large supply of this commodity which would have arrived at maturity, simultaneously with the completion of the Railroad, moreover Captain Glover considers "that the large increased amount of vegetation would "have a salutary effect on the country in decreasing the excessive heat by the protection and "shade afforded, and also in preserving the natural humidity by preventing evaporation." If convenient seasons, such as the periodical rains, are seized, the experiment might be carried on in any part of the country, while on the canal it might be commenced at any time. Captain Glover's object in bringing this subject to notice was "to show that these lands partially infect- "ed with "Rêh" are still capable of being turned to practical use and are not entirely useless "as is supposed."

24. The total cost of all establishment employed on these canals during the last year including the pay of officers and office establishment, amounts to Rupees 96,894-8-4 of which Rupees 61,787-11-1 are chargeable to the Executive Department, leaving Rupees 35,106-13-3, or about 7·5 per cent. only on the income for the expense of measurement, collection of Revenue, and Police, which is a most satisfactory result; and which I can conceive no method of reducing, as the different duties are so intimately connected that the removal of any one description would not admit of a reduction of Establishment.

25. The total expenditure on works of all kinds on these canals for the last year amounts to Rupees 165,950-4-0, and the establishment employed to 61,787-11-1, or 37 per cent. on the expenditure; which appears a large proportion, but when it is considered that this included the pay of all the Officers, Overseers, and office establishment, usually chargeable to the Public Works Department, it will, I hope, be seen that the charge is not large. It must be considered that constant supervision has to be maintained over a length of canal of 434 miles, of which both the banks have to be patrolled and kept in repairs, besides a considerable length of Rajbuhas and drainage lines, which probably double this extent. And as an accident to any portion of the line would entail heavy losses to Government in reimbursing the country for damages committed by the water, and entail a direct loss in canal revenue, it will be seen that heavy interests are at stake, and that it would be false economy to reduce the present scale of establishment; last year the Government sanctioned the division of the whole line into four executive charges and I have little doubt that the extra supervision thus obtained, and the more ready means of access to European officers thus afforded to the cultivators has greatly tended to bring about the splendid results of the past season.

Original Work	34,961	13	4
Ordinary Repairs	64,566	8	6
Plantations	3,862	11	0
Contingencies	40,428	7	1
Tuckavee Works	22,127	12	1
Total..	165,950	4	0

26. The expenditure on original works for the past year amounts to Rupees 34,964-13-4. The principal works are a large cut in the Jumna at Dadoopoor for carrying off the floods of the Sombe and Patralla rivers into the branch of the Jumna, commonly called Blane's cut: a new cut Kanjnoon Escape channel, nearly a mile in length, giving improved means of regulating the canal supply: a large drainage line excavated nearly 2 miles in length for removing the swamps existing on the left bank of the canal between Indree and Kurnaul: and the regulating bridge at Rer has been considerably improved. On the Delhie line upwards of a mile of new canal in different places has been excavated: a new 2nd class chowkee has been erected at Durrinpoor: and the Poolchudder-Aqueduct near Delhie, as well as several bridges destroyed by the British Forces in 1857, have been repaired.

27. On the Hansie branch a new cut of nearly a mile in length has been excavated, and a bathing ghat constructed for the village of Sbera. The new cut above referred to, is in substitution of an old tortuous channel at the head of the Rohtuc canal, which used to collect silt in such vast quantities, that silt clearances were constantly required to keep the head of the Rohtuc branch open. These silt clearances which had to be excavated in running water were very expensive, and even in spite of them it was a matter of extreme difficulty to maintain the supply of water in that Canal. The new cut will, I trust, entirely remedy this serious evil, and enable the supply of the Rohtuc canal to be maintained with regularity. The cost of all these works is chargeable to the original construction of the canal, thereby increasing the amount of the capital.

28. The total cost on annual repairs, including plantations and contingencies, amounts to rupees 108,857-10-7, giving a cost of about rupees 250 per mile for the cost of maintenance and repair, a charge susceptible of considerable reduction, as the state of the canal generally becomes improved. This charge includes repairs to banks, masonry works, and canal bed itself.

29. There are several new projects under consideration, some of which have been submitted to Government, and some are still awaiting details, to admit of their being forwarded. Among the principal may be noticed a new line of about 40 miles in length on the Delhi branch, the details of which are being elaborated, and by which it is hoped to reduce the surface level of the water, and get rid of many of the evils to which the present high level gives rise.

30. The next project is for a new line about 12 miles in length between Indree and Booda Khera, by which it is hoped to effect a saving of about 8 miles in the length of the canal, and to bring into utility about 300 cubic feet per second of water which now runs to waste in feeding jheels, bordering the present line of canal. The cost of this project is estimated at Rupees 1,75,000, and it is anticipated that it will return a direct income of Rupees 50,000 annually. This has received conditional sanction from Government, and is now under construction.

31. In conjunction with the above Captain Glover suggests a new line of Rajbuha of 20 or 25 feet of width of bottom to leave the canal at Indree, the head of the cut referred to in the last paragraph, and run along the high land, skirting Kurnaul and re-entering the canal in the Bullah branch near Moonuk, this would afford irrigation to a considerable tract of country where it would be much appreciated. I believe this line to be perfectly practicable, though the excavation at the head where it enters the Bangur or high land may be deep, and its cost may therefore be somewhat high, but the value of 300 cubic feet per second of water is too great to be thrown away, and would very soon cover the cost of the Rajbuha required for distributing it over the country. The Superintendent of the Western Jumna canals has therefore been requested to pay his attention to this line of Rajbuha or branch canal, at an early period of the next working season, when the project will be submitted to the Government.

32. Captain Glover has also submitted a project for a new supplementary head leaving the Jumna near the village of Kulsowra and entering the canal near Booda Khera above Kurnaul. The cost of this is estimated at about Rupees 40,000, and it is calculated that in the lowest seasons of the river supply it would throw about 300 cubic feet of water per second into the canal, and be a most valuable aid to irrigation just at the time it was most required. Had this head been in existence during the last year, its assistance would have been incalculable.

33. The upper portion of the Rohtuk branch for about 20 miles in length requires remodelling, and instructions have been issued to have the line examined early next cold weather.

34. In the Northern division, Captain Glover proposes to alter the whole line and to divide the alteration into 3 or 4 portions, starting from the various bridges as obligatory points and remodelling the portions of canal between them. Great wastage of water occurs in this portion of the canal and great good effect would result from its improvement.

35. In the Hansi branch also, much has to be done to bring it to perfection, and the improvements of this line will receive the attention of the officer in charge of it.

36. I feel assured that the result of Captain Glover's operations during the past year will be considered highly satisfactory by the Punjaub Government. Captain Glover from the time he took charge of the Western Jumna canals has labored most zealously and efficiently both for the welfare of agricultural community, with whom in this important charge he is thrown into such constant communication, and also for the interests of Government. We were visited last year both by His Honor the Lieutenant Governor, and also by the Financial Commissioner of the Punjaub, and I trust that those visits will have left impressions that so far as the Canal officers' duties are concerned, the real interests of the land holders are deeply consulted, and receive every attention at their hands. Captain Glover has thoroughly identified himself with the people he has had to deal with, and I feel convinced that while his efforts to do justice to all have been fully appreciated by them, his unvarying good nature and temper in listening to their complaints have left a strong impression for good upon their minds. It will be seen from the 29th and succeeding paragraphs of this report that Captain Glover has been actively engaged, in the preparation of several projects of importance to the material benefit of the charge entrusted to him, while he has brought the Canal Revenue up to such a height as was never before reached. For these successful endeavours on his part to aid the Government and the country during such a trying season as the past, I consider him entitled to, and would venture to ask for, the special thanks of the Government.

37. Captain Glover brings to notice the exertions of the Officers and Overseers under his orders, who have all performed their duties carefully and intelligently. He mentions those of Captain Earle, who was formerly Superintendent in charge of the Delhie Canal, and is now in charge of the Hansi Branch; Lieutenant Jeffreys, Superintendent of the Rohtuk Canal; Lieutenant Moncrieff, Superintendent of the Delhie Branch; and Mr. Duncan in charge of the Upper or Northern Division of the Western Jumna canals; laso Serjeants Corcoran, James Maloney, and Wilson, who have all been favorably noticed by the Officers under whom they have served. Captain Glover also mentions that Lieutenant Jeffreys, in addition to conducting his duties to his satisfaction, has also made himself particularly useful in lining out one or two additional works requiring a considerable amount of laborious application and judgment, which he has performed greatly to Captain Glover's satisfaction. I think that all these Officer and Overseers are entitled to the favorable notice of the Government.

A. D. TURNBULL, *Lieutenant-Colonel,*
Superintendent General of Irrigation,
N. W. Provinces.

P. S.—Since writing the above I have received from the Financial Commissioner of the Punjaub, certain statements showing the additional value of the Western Jumna canals to the Government by reason of the increased assessments upon the land irrigated by them, and which has hitherto been credited only in the land Revenue Accounts.

These Statements condensed are as follows:—

Number of Villages.	Name of District.	Actual Assessment.	Assessment at Barani Rates.	Balance due to Presence of Canal.		
78	Delhie.	1,51,745	1,12,970	38,775	0	0
180	Kurnaul.	4,62,961	2,79,537-3-9	1,83,423	12	0
95	Rohtuk.	2,84,760	2,07,026	77,734	0	0
62	Hissar.	1,12,320	43,145	69,175	0	0
415		10,11,786	6,42,678-3-9	3,69,107	12	0

Showing the net advantage derived by the Government from the presence of the Canals, in the land Revenue Accounts alone, after deducting the sum of Company's Rupees 22,802-15-3 for remissions permanently made for losses to certain lands from swamps arising from the proximity of the Canal.

Thus then in addition to securing the land revenue, amounting to upwards of 10 lacs of Rupees, during a very severe famine year, the advantages to the Government are during the past year:—

	RS.	A.	P.
Increased land assessment ...	3,69,107	12	0
Water Rent......	4,63,344	9	2
Total......	8,32,452	5	2

It would appear therefore from the foregoing that the Canal account is entitled to credit for the large sum annually of 369,103 Rupees with interest also at 5 per cent. (as we have paid the Government interest annually at the rate of 5 per cent. on the capital expended) since the several dates on which the existing settlements for the land revenue were made in the four districts through which the Canal passes.

I am not aware of these dates, but as the District of Hissar is now being re-settled, and as the last settlements were made for 20 years, I assume that the settlements in these adjoining districts all run for nearly this period. Hence we obtain a new credit to the Canal west of the Jumna of 3,69,107-12-0 × d. by 20, or 73,82,155 Rupees on account of land rent. As shown in the body of the report, the net profit to the Government derived from water rent, and other sources, after deducting all expenses for establishment (which includes all salaries), and maintenance, since the Canals were opened, amounts to 37,75,695-15-9 and the total of these two sums, viz., 1,11,57,850 Rupees will show the clear profit to the Government derived from these magnificent Canals. Much however still remains to be done on them, and with these large figures before the Government, I feel assured that the 10 or 12 lacs which will be required during the next few years will be willingly given to place them in first rate working order, and to render them even yet more productive, than they have been, and a still greater blessing to the country than they have proved to be during this severe year of famine of 1860-61.

A. D. TURNBULL, Lieut.-Colonel,
Supt. Genl. of Irrigation, N. W. Provinces.

APPENDIX I.

Statement showing the quantity of Land Irrigated and Water Rent levied in the various Districts of the Western Jumna Canals for 1860-61.

Zillah.	Water Rent. 1st Class. Tor. Beegahs.	Biswas.	1st Class. Dal. Beegahs.	Biswas.	2nd Class. Tor. Beegahs.	Biswas.	2nd Class. Dal. Beegahs.	Biswas.	Total. Beegahs.	Biswas.	Revenue on Water Rent. RS.	A.	P.	Miscellaneous. Rent on Water Mills. RS.	A.	P.	Rent on Watering Cattle. RS.	A.	P.	Rent on Rafting Timbers. RS.	A.	P.	Sale of Canal produce. RS.	A.	P.	Fines for breach of Canal Regulations. RS.	A.	P.	Total of Miscellaneous Revenue. RS.	A.	P.	Grand Total. RS.	A.	P.
Northern...	5,966	6	3,842	7	1,063	0	1,841	9	12,713	2	7,414	4	5	......	...	...	......	...	...	5,694	11	2	1,238	11	8	792	12	2	7,726	3	0	15,140	7	5
Kurnaul ...	48,142	2	19,575	0	19,660	1	12,226	15	99,603	18	57,906	9	11	......	...	...	83	11	5	1,954	15	5	1,220	0	0	218	11	1	3,474	5	11	61,380	15	10
Paniput ...	54,078	11	19,522	7	14,113	18	9,068	15	96,783	11	59,034	13	10	......	...	...	52	12	2	......	...	...	555	0	3	204	7	0	812	3	5	59,847	1	3
Soneput ...	70,827	3	5,166	18	24,139	12	6,493	18	1,06,627	11	67,791	5	1	......	...	...	......	...	...	32	8	0	663	9	9	224	9	0	920	10	9	68,711	15	10
Delhie......	44,473	18	585	16	22,557	12	2,492	17	70,109	17	43,835	3	11	1,244	6	5	9	13	6	......	...	...	2,689	10	9	177	9	0	4,121	7	8	47,956	11	7
Kohtuk ...	57,141	17	4,772	3	24,341	1	5,820	18	92,075	19	57,255	9	7	......	...	...	50	14	6	......	...	...	631	11	0	724	1	0	1,406	10	6	58,642	4	1
Jheend ...	43,944	2	11,201	16	17,769	14	7,866	2	80,781	14	48,421	2	9	......	...	...	177	8	1	......	...	...	515	8	3	358	0	0	1,051	0	4	49,472	3	1
Hansee ...	51,843	16	12,607	11	34,317	8	13,956	6	1,12,725	1	63,846	14	2	21	11	0	50	1	10	......	...	...	634	6	9	345	1	3	1,051	4	10	64,898	3	0
Western ...	937	14	524	13	1,376	5	2,907	4	5,745	16	2,447	8	7	......	...	...	131	15	13	......	...	...	231	14	11	70	11	0	434	9	9	2,882	2	4
Bootana ...	31,195	11	3,194	10	19,205	18	2,505	11	56,101	10	33,779	5	8	......	...	...	6	0	0	......	...	...	289	2	2	339	0	11	633	3	1	34,412	8	9
Total...	4,08,551	0	80,993	1	1,78,544	9	65,179	9	7,33,267	19	4,41,712	13	11	1,266	1	5	558	13	4	7,682	2	7	8,669	11	6	3,454	14	5	21,631	11	3	4,63,344	9	2

(Signed) T. G. GLOVER, Captain,

Supt. Western Jumna Canals.

A. D. TURNBULL, Lieut.-Colonel,

Supt. Genl. of Irrigation, N. W. P.

APPENDIX II.

COMPARATIVE Abstract of the Income and Current Expenditure of the Canals West of Jumna for the Rubbee Crop of 1859-60 and 1860-61.

Canal Office West of Jumna, 15th July, 1861.

Canal Income collected by the Superintendent.

Year.	Season.	What rent on irrigation of rubbee crops. RS.	A.	P.	Rent on watering cattle. RS.	A.	P.	Rent on water mills. RS.	A.	P.	Transit duties on rafts of timber, &c. RS.	A.	P.	Sale of produce of the canal bounds. RS.	A.	P.	Sundry collections, viz., filling tanks, fishing nets, &c., &c. RS.	A.	P.	Fines for breaches of the Canal regulations. RS.	A.	P.	Total of the half-yearly income. RS.	A.	P.
1859-60.	Rubbee..	2,02,405	1	3	1,001	2	1	1,642	10	1	6,998	14	1	1,466	7	5	3	0	0	4,037	6	10	2,17,554	9	9
1860-61.	Rubbee.	2,70,149	1	11	558	13	4	309	5	11	4,032	11	5	3,234	4	0	...	...	...	3,203	5	11	2,81,487	10	6
Difference excess..		2,67,744	0	8	...	...	...	...	...	...	...	...	...	1,767	12	7	...	...	...	...	...	...	63,933	0	9
Difference decrease		...	...	...	2,442	4	6	1,333	4	2	2,966	2	8	...	...	...	3	0	0	834	0	11	...	...	...

Current Expenditure as per Bills.

Year.	Season.	Establishment for superintendence of works, collections of revenue and all duties. RS.	A.	P.	Cost of ordinary repairs, Plantations, Contingencies. RS.	A.	P.	Total of half-yearly current expenditure of every description. RS.	A.	P.
1859-60.	Rubbee..	44,925	13	4	46,468	15	1	91,394	12	5
1860-61.	Rubbee.	52,136	7	5	48,398	12	6	1,00,535	3	11
Difference excess..		7,210	10	1	1,929	13	5	9,140	7	6
Difference decrease		...	...	...	...	...	...	...	...	...

Remarks by the Superintendent Canals west of Jumna.

The increase of watering is due to the great increase of demand for irrigation on the failure of the periodical rains. The decrease on watering cattle is due to the villages taking increased quantites of water which absolve them from this tax. Decrease on water mills due to the water being employed in the more important object of irrigation. Decrease on rafting timber is due to the exhaustion of the forests. Increase of sale of Canal produce accidental.

(Signed) T. G. GLOVER, *Captain,*
Supdt. Western Jumna Canals.

A. D. TURNBULL, *Lieut.-Colonel,*
Supdt. General of Irrigation, N. W. P.

APPENDIX III.

COMPARATIVE ABSTRACT of the Income and Current Expenditure of the Western Jumna Canals for the years 1859-60 and 1860-61.

Years.	Canal income collected by the Superintendent.																								Current expenditure as per Bills.								
	Water rent on irrigation.			Rent on watering cattle.			Rent on water mills.			Transit duties on rafts of timber, &c.			Sale of produce of the canal bounds.			Sundry collections, viz., filling tanks, fishing nets, &c., &c.			Fines for breaches of the Canal regulations.			Total of the yearly income.			Establishment for superintendence of work, collections of revenue and all duties.			Cost of ordinary repairs, plantations and contingencies			Total of yearly current expenditure of every description.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
1859-60 ...	3,38,958	8	9	1,001	2	1	3,532	10	5	11,514	5	0	5,262	4	11	601	1	6	5,464	5	2	3,66,334	5	10	81,775	7	2	97,570	6	6	1,79,345	13	8
1860-61 ...	4,41,712	13	11	558	13	4	1,266	1	5	7,682	2	7	6,688	5	3	12	0	0	5,424	4	8	4,63,344	9	2	96,894	8	4	1,88,857	10	7	2,05,752	2	11
Difference excess ...	1,02,754	5	2	...	...	...	...	...	...	...	...	...	1,426	0	4	...	...	...	...	...	...	97,010	3	4	15,119	1	2	11,287	4	1	26,406	5	3
Difference decrease...	...	...	...	442	4	9	2,266	9	0	3,832	2	5	...	...	...	589	1	6	40	0	6	...	...	...	...	...	...	...	...	...	...	...	...

(Signed) T. G. GLOVER, Captain,
Supdt. Western Jumna Canals.

A. D. TURNBULL, Lieut.-Colonel,
Supdt. General of Irrigation, N. W. P.

APPENDIX IV.

Statement showing the area of Cultivation, and amount and value of produce on Lands irrigated by the Western Jumna Canals, during the year 1860-61.

	Khureef, 1860.	Rubbee, 1860-61.	Total areas 1860-61.	Estimate of Produce.		Average price in Bazar.	Total value of Crops.
	Area in Beegahs.	Area in Beegahs.	Area in Beegahs.	Per Beegah.	Total.		
				Mds. S. C.	Mds. S. C.		Rs. A. P.
Ajwain, ...	22 18	12 0	34 18	0 15 0	13 3 8	5 Seers per R.	104 11 2
Barley, ...	......	33,022 13	33,022 13	12 0 0	396,271 32 0	16¼	975,438 4 5
Cheenab, ...	......	589 2	589 2	8 0 0	4,712 32 0	20	9,425 9 6
Chillies, ...	0 2	......	0 2	1 0 0	0 4 0	8	0 8 0
Churree, ...	......	1,156 17	1,156 17	3 Rs. per Bh.	1,156 17 0	3	3,470 8 10
Cotton, ...	69,925 7	......	69,925 7	2 20 0	174,813 15 0	3 S. 6 C. p. R.	2,071,862 3 6
Fruits, ...	3,024 4	3,289 2	6,313 6	50 Rs. per Bh.	6,313 6 0	50	3,15,665 0 0
Goor { The measurements show the amount of Sugar-cane grown, and the produce is given in Sugar,)...	41,763 2	......	41,763 2	20 0 0	835,262 0 0	11 Seers,	30,37,316 5 10
Gram, ...	......	1,11,678 12	111,678 12	12 0 0	13,40,143 8 0	14½ Seers.	36,96,946 12 1
Indian Corn, ...	3,192 18	......	3,192 18	15 0 0	47,893 20 0	15¼ Seers,	2,25,622 4 8
Indigo, ...	2,236 3	......	2,236 3	0 10 0	559 1 8	100 R. per Md.	55,903 12 0
Jowar, ...	71,802 17	......	71,802 17	12 0 0	8,61,634 8 0	12¼ Seers p. R.	28,13,499 6 10
Koosumbah, ...	......	1 10	1 10	0 30 0	1 5 0	3 Seers,	15 0 0
Lucerne and Country grass, ...	139 7	......	139 7	3 per Beegah.	139 7 0	3 Seers,	418 0 9
Methee, ...	......	17 18	17 18	7 0 0	125 12 0	10 Seers,	501 3 3
Murwah, ...	130 11	......	130 11	8 0 0	1,044 16 0	20 Seers,	2,038 12 6

APPENDIX No. IV.—(*Continued.*)

	Khureef, 1860.	Rubbee, 1860-61.	Total areas 1860-61.	Estimate of Produce.						Average price in Bazar.	Total value of Crops.		
	Area in Beeghas.	Area in Beegahs.	Area in Beegahs.	Per Beegah.			Total.						
				Mds.	S.	C.	Mds.	S.	C.		RS.	A.	P.
Oats, ...	....	1,141 5	1,141 5	30	0	0	34,237	20	0	1½ Md.	22,825	0	0
Oorud, ...	0 18	....	0 18	8	0	0		7	8	10 Seers.	28	12	9
Opium, ...	0 0	18 3	18 3	0	0	0	1	32	9	8 Rs. per Sr.	580	8	0
Rice, ...	71,944 4	....	71,944, 4	15	0	0	10,79,163	0	0	8 Seers per R.	53,95,815	0	0
Singharrah, ...	284 19	....	284 19	50	0	0	14,247	20	0	2 Md.	7,123	12	0
Tobacco, ...	....	88 0	88 0	5	0	0	440	0	0	12 Seers.	1,466	10	8
Tona or Oil seed, ...	6 11	....	6 11	8	0	0	52	16	0	20 Seers.	104	12	9
Tulsee, ...	....	0 8	0 8	8	0	0		3	8	16 Seers.	8	0	0
Vegetables, ...	2,167 2	1,439 11	3,606 13	50	0	0	180,332		½	2 Mds.	90,166	4	0
Wheat, ...	....	289,920 8	289,920 8	12	0	0	34,79,044	32	0	11 Seers.	12,651,072	0	0
Total, ...	266,641 3	442,375 9	709,016 12	....			....			....	31,277,469	3	9

(Signed) T. G. GLOVER, Captain,

Superintendent W. Jumna Canals.

ROORKEE,

14th September 1861.

A. D. TURNBULL, Lieut.-Colonel,

Supt. General of Irrigation, N. W. P.

No. 3,238.

FROM

SECRETARY TO GOVERNMENT, PUNJAB,

Public Works Department.

To

THE SUPERINTENDENT GENERAL OF IRRIGATION,

N. W. PROVINCES.

Dated Lahore, 14th December, 1861.

SIR,—Your "Report on the operations of the Western Jumna canals during the year "1860-61," has been perused by his Honor the Lieutenant Governor with much interest. The results you have described are, in the highest degree, satisfactory, and fully establish the importance and great value of these canals. They have, by the successful operations of the past official year, though with a supply diminished by the drought of that season, afforded the means of cultivation over a very extended area, preserving it from the effects of the famine, which its produce helped to mitigate in surrounding districts.

2.—The progressive improvement of these canals, the extension of cultivation due to their agency, their success in a financial view, and the general results you have reported upon, may here be briefly reviewed.

3.—The area irrigated in 1859-60 amounted to 2,96,252 beegahs, (185157·5 acres or 289·3 square miles) and this is said to have been much in excess of ordinary years, while in 1860-61 it arose to 7,33,267 beegahs (458291·8 acres or 716 square miles) scattered over an area of probably ten times that extent of country, benefiting 695 villages in districts which bordered upon those where the famine was most severely felt.

4.—That this vast increase of irrigation was caused by the demand for water consequent on the failure of the periodical rains is doubtless the correct view ; the circumstances were exceptional ; and it is probable the increase may not be maintained, now that the occasion for such a demand has passed away ; but it is satisfactory that these canals were capable of meeting such a drain at a period of such necessity, and this at a time when the effect of drought had been to reduce the ordinary discharge of the Jumna from nearly 3,500 cubic feet per second as determined by Colonel Abbott in February 1849, to about 1,900 cubic feet as calculated by Captain Glover in March 1861.

5.—The financial results of the above increase of irrigation are stated in the 13th para. of your report, which shows that the total income of these canals for the past year amounted to Rs. 4,63,344, (£46,334) an increase of nearly one lakh (£10,000) above the largest revenue realized since they were opened, and giving a *net* return, after payment of all charges, of Rs. 2,57,592 (£25,759) an amount said to be not far short of the gross income of ordinary years.

6.—That these canals in addition to the benefits they confer upon the Districts through which they run, afford a large return for the money spent upon their construction is exhibited by the figures in para. 14. An expenditure of Rs. 16,84,624-13-2 (£168,462) has been incurred upon the construction and improvement of these canals. This amount *has been repaid* ; and a net profit has accrued to Government of Rs. 37,75,696 (£377,569) after reimbursing it for all outlay on account of original cost, subsequent improvement and maintenance. Government has thus been repaid 325 per cent. on original outlay ; and direct taxation during the year under review, gave a profit of 18 per cent. on the Capital invested.

7.—From the following paragraph 15, taking the lowest estimate, it would appear that the value of the produce from the lands irrigated by these canals, must have been last year between $2\frac{1}{2}$ and $2\frac{3}{4}$ millions of £ sterling, and the amount of the grain thrown into the market amounted

to 72,51,685 maunds (5,179,775 cwt. or nearly 259,000 tons) sufficient for the support of 8,00,000 people for one year; or by a more sparing distribution, sufficient to keep 12,00,000 human beings alive for the same period. Important results, when it is borne in mind that in a year likely the past, the produce valued at so much, and capable of sustaining so many, might have been lost, but for the means of irrigation afforded by these canals.

8.—The produce also of sugar, grown to the value of more than 30 lakhs (£300,000) Indigo, 55,901 (£5,590) and Cotton, upwards of 20 lakhs, (£200,000) from important items in an estimate of benefits derived from these canals.

9.—The subject of Cotton growing alluded to in paragraph 17 is one of great interest at the present moment. His Honor will be glad to receive the promised specimens of the Cotton grown from the seed supplied by Mr. Berkeley, and they should be accompanied by some details of the sowing, treatment, picking, &c.

10.—Adverting to your 19th paragraph and examination of the water of the Ravee taken from the river at Madhopoor has led to an interesting report by Mr. Medlicott of the Thomason College at Roorkee on the subject of "Reh" efflorescence, of which report a copy is forwarded for your information. At the suggestion of Captain Dyas, His Honor the Lieutenant Governor has directed Dr. Brown, the Chemical Examiner for the Punjab, to extend this examination to the waters of each of the Punjab rivers.

11.—It is doubtful whether this efflorescence can be accounted for in the ways suggested in your report. In the Lahore district it makes its appearance on lands irrigated from wells, where the water is very far from the surface. It appears probable that it is not due either to the water alone, or to the soil alone, but that water holding certain matters in solution or suspension, combining with soil containing certain constituents, produces in time a sufficient quantity of the Reh to interfere with cultivation.

12.—In para. 20 of the report, the *Reh* and *Shor* or Saltpetere appear to be considered similar in their effects, and are spoken of almost indiscriminately. But in this district, the latter is actually employed successfully to neutralize the former, being scraped up where it is found abundantly, and cast over fields suffering from *Kullur* or *Reh.* They thus appear to be in a measure antagonistic in their action on vegetation.

13.—It is not impossible that the growing of *Keekur** or other trees or plants on Reh lands may itself be found a remedy, and that after a time, the lands so used, may be restored to cultivation of grain or other ordinary crops. Meantime the Keekur sown over a considerable area will itself be valuable. In your letter of the 10 July last, you reported that you had directed Captain Glover to confine his experiment for the past season to the sowing of 50 beegahs of Reh land with Keekur seed. The approval of his Honor the Lieutenant Governor was communicated in my letter No. 653c, of the 19th July last.

14.—I am to request you will report what has been done, and take into consideration whether it would be advisable to sow Keekur over a larger area, or whether it would be well to try other seeds. In the Lahore district, Tobacco and some kinds of vegetables, are grown on land affected with "Reh." The experiment might also be tried with these on the land so effected in the neighbourhood of the Western Jumna canals.

15.—His Honor desires that Captain Glover's recommendation to have the discharge of the Jumna measured annually in February should be attended to. He fully enters into the difficulties adverted to in your 5th paragraph with regard to the regulating the proportion of the waters to be taken from the Jumna for the Eastern and Western Canals. The arrangements for this described by you are probably the best that can be made under present circumstances. It is presumed that the distribution would be much facilitated by the construction of the masonry dam and head works for both canals proposed by you in April last.

* Acacia Arabica.

16.—It is observed in paragraph 10 of your report that the demand for water for the use of the mills at Hansi has declined considerably of late years, since it ceased to be a military station. As mills are useful, and profitable appendages of a canal, His honor would wish you to consider and report, whether there are any other places where new ones might advantageously be established.

17.—In the same paragraph is noticed the diminution in the amount of fees on timber rafted down the canal, in consequence of the exhaustion of the forests on the Jumna; which also rendered it necessary for you on a late occasion to send to the Ganges for Sal.* It is suggested that Deodar† might be brought into general use on the canal, as it is believed that it could be obtained with less difficulty and at a smaller cost from the Simla hills. The Commissioner Cis-Sutlej States has reported that arrangements are in preparation for procuring supplies of Deodar from the valleys of the Pubhur and Tonse, and floating it down the Jumna to Delhi. If these arrangements are carried out, the canal will obtain timber readily, and may be able to aid and encourage this endeavour to establish a regular supply.

18.—Allusion is made in your 32nd para. to Captain Glover's project for a new supplementary head for the canal, leaving the Jumna near the village of Kulsowra: but no reference is made to my letter No. 589 C. of the 1st July last, returning the project, and pointing out that this was a work attempted by Colonel Colvin in 1828, and abandoned after some progress had been made with the preliminary operations, in consequence of the river at that part being found unsuitable for the construction of a canal head. It was asked whether there was reason to believe that the circumstances were in any way changed, so that the scheme which Colonel Colvin was obliged to relinquish might now be undertaken with good prospect of success. This has not yet been replied to.

19.—There can be little doubt of the great advantage of the improvements contemplated in your 34th para.

20.—His Honor the Lieutenant Governor in expressing his satisfaction with the favorable results reported upon, fully concurs in the commendation bestowed upon Captain Glover in para. 36. This Officer has shown a hearty and right appreciation of the importance of his position, and his opportunities of usefulness in relation alike to the welfare of the people, and to the interests of Government. He bestowed much earnest care and labour on the work whilst he was Superintendent of these Canals, to which he may still, in his new position, have an opportunity of giving some attention.

21.—I am also desired to convey His Honor's acknowledgments to those officers and subordinates, of whom Captain Glover has reported so favorably, and have to request that you will communicate this recognition of their services to

Captain Earle, as Superintendent Delhi Canal and subsequently of the Hansi branch.

Lieutenant Jeffreys, Superintendent Rohtuk branch.

Lieutenant Moncrieff, Superintendent Delhi branch.

Mr. Duncan, in charge of the Upper Division,

as also to Sergeants Corcoran, James Malony, and Wilson.

22.—In conclusion I am to express His Honor's high sense of the services you have rendered in the general supervision of these Canals, to which in no slight degree is due those results which have called forth his satisfaction, and the successful working of the establishments to whom he has tendered his acknowledgments.

I have, &c.,
ROBERT MACLAGAN, *Lieutenant-Colonel,*
Secretary, Government of Punjaub,
Public Works Department.

* Shorea Robusta.
† Cedrus Deodara.

Copy of a letter, dated 21st *May* 1861, *from Mr. H. B. Medlicott, Professor of Geology, Thomason College, to Director of Canals, Punjaub, (referred to in paragraph* 10 *of the above letter.)*

With reference to your letters Nos, 1,478 and 1,590 of 28th March and 11th April, I will not delay the following memorandum any longer, that it may be in time, as you desire for your Annual Report in June. Such analyses are, you must be aware, very tedious. I could, by taking a larger quantity of water, and spending much more time over it, give a more exact account of its contents, but I have already done enough to give a clue to the question you proposed, namely, the possible injurious effects of the water upon vegetation. Should you think it worth while to quote my remarks, I would recommend that it be done in full, so that any future examiner may know how far they are reliable.

One gallon of the water taken from the Head Regulator in equal portions on the 1st and 18th of September, 3rd and 15th October, 15th November, and 1st and 15th December 1860, filtered and evaporated, gave 7·14 grains of matter that had been in solution. Of this 3·44 was re-dissolved by water. This latter quantity gave 0·50 chloride of sodium, equivalent to 0·20 of table salt in the water. It gave a further precipitate of sulphate of soda 2·36, equivalent to 1·43 of glauber salt, or to 1·22 of anhydrous soda alum, or to 2·31 of the hydrous alum. Even taking the latter value, it leaves ·93 of the 3·44 unaccounted for. I had not time to repeat the operation, or, I believe, I could have traced this deficit to insufficient burning of the total residue, the quantity 3·44 being in consequence too high. I believe the sulphates in the water to be glauber salt and alum, principally the former.

The portion of the residue not re-dissolved in water, consisted of 3·16 carbonate of lime and about 40 sulphate of lime. The soluble ingredients then are in 70,000 grains of water.

Common Salt, Glauber Salt (Sulphate of Soda), with some Alum (Sulphate of Alumina and Soda)	1·43
Carbonate of Lime	3·16
Sulphate of Lime	·44
	5·23

Besides the source of deficit above pointed out, there are the numerous infinitesimal quantities of other substances that exist in all waters. I believe I have fixed those that can be of any influence in the present question.

The salt separated from the gallon of water by filtration, only amounted to 16·11 grains dried at 212°. In burning it lost ·69:—boiled for two hours in dilute hydrochloric acid, there

was an insoluble residue 12·89; the 2·53 dissolved consisting of 2· of peroxide of iron with a little silver and alumina, and ·53 of lime,

Water, ...	70,000	
Silt, ...		16·11
Organic matter or water, ...		·69
Peroxide of iron, silica, alumina, ...		2·0
Lime, ...		·53
Insoluble residue, ...		12·89
		16·11

It is only in the soluble element that any possible noxious substance is looked for; and there I confess the result has surprised me. After the carbonate and sulphate of lime which are harmless, there are the two highly soluble alkaline salts in the proportion of 88 per cent. glauber salt and 12 per cent. culinary salt. Now this is the constitution of the well known Rêh, that does so much damage in certain districts along the Western Jumna Canals. Two samples that I analysed from these, gave one but 3 per cent. of the chloride, and the other 25 per cent., the proportions varying greatly.

The source of this Rêh has always been a puzzle, but we now seem to have got a clue to it; at least to a source of it. The quantity of it in the Ravee water is but $\frac{23}{1,000,000}$. I cannot give my own authority, nor can I quote any other upon the possible effects upon vegetation of so very diluted a poison, but it may be very serious, and by accumulation from evaporation almost must become so. Nothing but a careful study on the ground can settle the point, and a most interesting question it is for the canal officers of these provinces. I will at once examine the Ganges and Jumna waters to see if they contain the same ingredient.

Copy of demi-official letter from Mr. Medlicott, dated Roorkee, 30th May 1861.

I have just completed my examination of the Ganges water, and find it has practically the same composition as that of the Ravee, viz., common salt 25 grains per gallon, and sulphate of soda 1·12 or of Rêh 1·46, being $\frac{23}{1,000,000}$

The other ingredients are also equivalent. It is more than probable that this is about the constant composition of the waters of these rivers. In working out this case, it must be easy to settle on the ground if the injury complained of proceeds from Rêh or not, and if not, there is no other ingredient in the water that could possibly do injury.

No. 42. ORDER THEREON, 2nd May 1862, No. 910.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Read the following :—

No. 43. MINUTE BY THE HONORABLE THE PRESIDENT.

1. The demand of the Chairman of the Manchester Cotton Company (Limited), made in rather an authoritative tone, is, that the North Canara District be handed over to the Bombay Presidency without delay. The complaints are :—

(1.) That all the promises made to the Company that the Shipping Pier at Sedasheghur and the new road from thence to Dharwar should be completed by February and March, have been and will be unfulfilled;

(2.) That the Company will suffer very great pecuniary loss in consequence of, what Mr. Platt chooses to call, culpable delay in carrying out the proposed works;

(3.) That the Cotton trade of India will suffer most grievously;

(4.) That the delay may be described as a calamity to the Cotton Trade of England.

2. The assertion is, that the Dharwar Cotton may be generally substituted for that of American growth. With regard to the demand, as it has been complied with, it is unnecessary for me to say anything; but with regard to the complaint, I have a right to observe that I am altogether unaware that any promise was made to the Company to the effect stated.

3. When the subject of the works required for the improvement of Sedasheghur Harbour was first referred to me, I pointed out the absurdity of a plan which embraced the construction of upwards of a mile of break water, costing upward of a million, for the defence of a Harbour which could only be the outlet of a trifling tract of country, and which was well sheltered during nine months of the year, and I proposed to limit the works to those which were necessary to facilitate the trade of the Port, or rather the trade which it was supposed, somewhat gratuitously, would flow to that Port. Instructions were therefore given to the Engineer to prepare Plans and Estimates for a Pier, which was accordingly done, and the means of constructing this were despatched from Madras.

4. The experience however of the south-west monsoon proved to the Engineer on the spot that the site proposed would not answer, and he was directed to select another. In the meantime I paid a visit to Sedasheghur, and after conversing with Captain Fraser, who had being lying in the Bay during the whole of the monsoon, and after a careful inspection of his plan and soundings of the Harbour, and a comparison of those with the plan of Captain Taylor, I arrived at the conclusion, based upon a long engineering experience, that to run out a Pier from the east side of the cove in shallow water and in water constantly getting shallower, would be both useless and expensive, and I adopted and directed the District Engineer to carry out the simpler, cheaper, and more readily executed plan of constructing a wharf along the deep water line of Carwar head.

5. Of the direction thus given, Mr. Haywood was perfectly cognizant, for the matter was discussed in his presence; and his coadjutor Dr. Forbes stated at the time that he never had any idea that it was intended to run out a Pier from the east shore. Such an idea was never contemplated by Captain Taylor.

6. If therefore, as I gather from the complaints of Mr. Haywood, he has chosen to purchase land on behalf of the Company and to build on the east side of the Harbour, under the idea that a Pier was going to be built, he has no one to blame but himself; for he was perfectly aware that no such Pier was intended by me to be built, and a simple question put to the District Engineer would have put him in possession of all the facts necessary to guide him in his decision.

7. With reference to the probability that the work would have been more quickly carried out by the Bombay officials than by those of Madras, Lieutenant-Colonel Walker's Report will afford sufficient explanation if any were necessary. There are, however, one or two statements made by Mr. Haywood relative to the discharge of men, which I should wish to have explained, and a reference on *these points* will be made to Lieutenant-Colonel Walker.

8. The complaints as to the pecuniary loss incurred by the Company; the grievous sufferings inflicted on the Cotton Trade of India; the calamity to the Cotton Trade of England; savor too strongly of an address by the Directors to the Shareholders of the Company as an excuse for failing dividends to need any remark.

9. I may say however, with reference to the scheme of an establishment at Sedasheghur, that, in my opinion, the Company would have acted more wisely had they placed their head-quarters in the dry country above the Ghâts. There they would have been in close proximity to the growers of Cotton.

10. The latter would have seen that the Company was in earnest; the crop would have been cleaned and packed in the dry climate of the upper country, and sent down whenever a ship was in readiness to receive it.

11. As it is, the Cotton will come down the Ghât probably in slovenly packed bundles, it will be liable to injury from moisture in coming down or in the stores in which it is proposed to place it.

12. This, however, is a matter which the Directors must settle with their Agent; should however they find out that he has not exercised a sound judgment in the selection of a site for their establishment, they must blame him, not the Government; at present the whole tone of Mr. Haywood's correspondence evinces a desire to throw responsibility off his own shoulders.

(Signed) W. T. DENISON.

April 1862.

No. 44. ORDER THEREON, 2nd May 1862, No. 911.

Ordered to lie over.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 45. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Fort Saint George, 27th March 1862, No. 101:—

SIR,

* No. 93.

1. On the 22nd instant the Agent* forwarded the accompanying plans and estimates amounting to Rupees 5,520 for constructing twenty sluices in the embankment of the Main Canal, to irrigate the lands lying between Sunkasala and Kurnool, calculated to amount to about 2,270 acres.

2. Eight of the sluices being formed at a trifling expense in the Calingulahs already sanctioned are not entered in the estimate. The remaining twelve are to be constructed according to the accompanying plans, varying only in depth of foundation. Where water is required to be given off at different levels, the sluices will be provided with a rear cistern.

Vide Sketch.

3. Besides the irrigation of the land, provision is made at sluice No. 19 for supplying water to the Town of Kurnool, to the extent of 30,000 cubic yards per day. The population of the Town is estimated at 30,000, this supply would therefore be at the rate of 166 gallons per head, but the manner and purposes of distribution cannot at present be stated. The suburban gardens and wells will probably require water immediately from this sluice.

4. The arrangement for working the shutters by a graduated scale is shown on an enlarged scale in the accompanying plan; and they are to be furnished with locks to secure them at any partial opening when necessary.

5. The branch Channels will be provided with earthenware sluices for the supply of water to the fields.

6. The first descriptive Memorandum forwarded by the Chief Engineer contained no information as to the area assigned to each sluice, the maximum rate at which the supply had been calculated or to the measures for securing an unvarying supply. I called for these particulars, and at the same time recommended that a different design of sluice should be adopted, by which all the necessary conditions should be satisfied, the supply to the cultivators rendered secure, and facility afforded to the Government Inspecting Officer for ascertaining at once whether the stipulated volume of water was being delivered.

7. These particulars are furnished in the accompanying letter† from the Executive Engineer of that Division of the Canal, who states that the sluices are planned to discharge 2 cubic yards per hour per acre, with a head of water varying from 1 to 6 feet, and that a table will be prepared for each sluice which will show at a glance the height to which the shutter should be raised in order to provide the requisite discharge with the available head.

† Attached to the one from the Agent, dated 22nd March 1862, No. 93, herein enclosed.

8. On learning from the Chief Engineer that he was proceeding with the construction of the sluices, I requested the Agent to direct their suspension pending replies to my objections; but as the explanation furnished meets for the most part those objections, I have allowed them to be proceeded with, as the openings left for them in the embankments cannot be closed till the body of the sluices is finished, and the regulating cistern can be added afterwards.

9. The area to be irrigated in this portion is so small compared with the supply of water which will enter the Canal, that I should not have thought it necessary to raise any demur as to the design of the sluices; but as similar plans had been furnished for those situated lower down the Canal where the area would be considerable, it appeared to me important that suitable and approved designs should be at once determined on for three reasons :—

(1.) That the supply of water which is limited (by the capacity of the Canal) might not run to waste.

(2.) That the Ryots should have their full supply secured without fail.

(3.) That the Government should receive the full value for the payment they have to make, and which is dependent on the interests of their cultivators being fully secured.

10. I trust these proceedings will meet with the approval of Government as the Chief Engineer expects to have the Canal as far as Kurnool ready for the admittance of the water by June next, and it is of course desirable that the sluices should be ready by that time, as it has been represented that the people are preparing their fields to receive the water.

11. With this point the subject of the water rate is naturally connected. I beg to inform the Government that the report called for from me on the subject was sent to the Board of Revenue on the 20th February 1862, No. 62.

12. In conclusion, I request that early sanction may be given to the accompanying plans and estimates amounting to Rupees 5,520.

No. 46. ORDER THEREON, 2nd May 1862, No. 912.

1. The Government sanction the estimates amounting to Rupees 5,520, submitted with the above letter, for twenty Irrigation sluices in the first portion of the Main Canal between Sunkasala and Kurnool. They agree with the Consulting Engineer's suggestions that the sluices in the Main Canal should be of a design that will secure the objects enumerated in paragraph 9, and they desire that he will arrange for their being constructed accordingly in the other portions of the Canal.

2. They approve also of his proceedings in reference to the sluices now sanctioned.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 47. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 9th April 1862, No. 12,488 :—

From District Engineer,	18th November 1861,	No. 215,	with one enclosure.
To do.	6th December	" No. 8,042.	
From do.	19th do.	" No. 254,	with two enclosures.
To do.	16th January 1862,	No. 9,375.	
From do.	21st February	" No. 321,	with one enclosure.
To do.	13th March	" No. 11 493.	
From do.	20th do	" No. 353.	with one enclosure.

SIR,

1. I have the honor to forward herewith the correspondence as per margin with the District Engineer Malabar, relative to certain advances made on account of the Tambracherry Ghát works by Mr. Smith, First Assistant District Engineer. The Statement thereof accompanying the District Engineer's letter of the 19th December 1861, No. 254, furnishes the following particulars :—

	RS. A. P.	RS. A. P.
Total of advances...		1,085 13 4
Amount recovered and credited in Account Current	52 0 0	
Value of sheep that died on the Ghát ...	64 0 0	
Advances due by deceased Dafádárs... ...	98 12 0	
Balance outstanding	871 1 4	
Total..................		1,085 13 4

2. Captain Bean reports that he had repeatedly pressed on Mr. Smith's attention the necessity for his effecting a settlement of the above advances ; but that he has not yet done so ; Mr. Smith states that he will be unable to recover the same unless permitted to proceed for the purpose, to Mysore and Wainád, and that had not his sudden illness necessitated his leaving the latter place, he would in all probability have recovered the whole amount outstanding. Mr. Smith further represents that of the sum of Rupees 871-1-4, shown above as requiring adjustment, Rupees 105 should have been recovered by Sub-Overseer Chukoo, for which, therefore, that individual is responsible.

3. From the District Engineer's letter of the 18th November last, it will be observed that that Officer admitted the necessity that existed for making the advances to the work-people ; but he objected to Mr. Smith having advanced large sums, and pointed to the fact, that in one instance alone an advance of Rupees 770 was made to one Rajoo Maistry without authority. From the subsequent correspondence with the District Engineer, it will be observed, that there was no such advance made, and that all those actually made by Mr. Smith were within the limit of Rupees 500, which he was at liberty to authorize without the previous consent of the District Engineer.

4. An Executive Officer engaged in such localities is entitled to consideration, as without doubt it would be next to impossible to accomplish works, if advances were not given, and therefore I would beg to recommend that the District Engineer's suggestion to allow Mr. Smith to proceed to Wainád during the monsoon may be granted, so as to allow him the opportunity to recover as much of the money as he can, and at the same time, as Sub-Overseer Chukoo has resigned his post, Mr. Smith should be instructed to endeavour to recover also the advances for which the Sub-Overseer is said to be responsible.

5. In conclusion, I recommend that authority may be granted for writing off to profit and loss the sum of Rupees 162-12-0, being the value of sheep that died on the Ghát and the advances due by deceased Dafádárs.

No. 48. ORDER THEREON, 2nd May 1862, No. 913.

1. Agreeably to the recommendation of the Officer in charge of the Audit and Account Departments of the Central Office, the Government permit Mr. H. B. Smith, First Assistant District Engineer Malabar, to proceed to Wainád during the monsoon month with a view to the recovery of the advances made by him on account of the Tambracherry Ghât works. During Mr. Smith's absence from his Range he will not be entitled to any travelling allowance.

2. On the receipt of Lieutenant-Colonel Rundall's report regarding the result of Mr. Smith's visit to Wainád, the Government will be prepared to pass orders relative to the disposal of the four sums aggregating to Rupees 1,085-13-4 mentioned in paragraph 1.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 49. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th April 1862, No. 258 G 56:—

SIR,

1 Letter dated 25th March 1862, No. 868, with one accompaniment.
1 Letter dated 13th March 1862, No. 841, with one accompaniment.

1. I have the honor to submit for the orders of Government papers, as per margin, from the District Engineer, Godavery, on the subject of the security tendered by Apprentices D. Janakiramiah and C. Nagaya.

* Entertained 1st October 1860.

2. Two sureties have been tendered by Janakiramiah,* but only one of them has been approved of by the Collector; and as the Apprentice states that he is not able to furnish another, and as he has no relatives or friends, besides the one accepted, who are competent to pay the penalty of Rupees 200, in the event of default on his part, I request that in accordance with the District Engineer's recommendation, one surety only may be in his case accepted.

† 16th November 1860.
‡ Circular, No. CXXIV, dated 15th December 1860.

3. As respects Apprentice Nagaya, Major Stoddard in the first instance recommended that as he was unable to furnish two sureties of Rupees 200 each, and as he was, moreover, entertained† prior to the issue‡ of the Order of Government, directing that security should be taken, he should be permitted to remain in the Department, stipulating that in the event of leaving it before the completion of his term of Apprenticeship, he should not be considered eligible for employment in any other branch of the service.

4. It appears, however, that the Apprentice has tendered one surety, who the Collector, reports," is in a position to be able to pay 100 Rupees at any time," and as Mr. First Assistant District Engineer Rundall, the Officer under whom the Apprentice is at present doing duty, states that he is a pains-taking youth and likely to prove a useful public servant, I request that as a special case the security he has offered may be accepted as sufficient.

No. 50. ORDER THEREON, 2nd May 1862, No. 914.

Under the circumstances represented by the Acting Deputy Chief Engineer, Northern Circle, and considering that both the Apprentices mentioned in the foregoing letter were entertained prior to the issue of the Chief Engineer's Circular No. 124, dated 15th December 1860, the Government authorize the acceptance of the security respectively tendered by them.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 51. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 19th April 1862, No. 12,845.

Read the following letter from Captain J. GODDARD, District Engineer of Coimbatore, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Ootacamund, 7th April 1862, No. 670 :—

SIR,

In reference to Extract Proceedings Chief Engineer, No. 3,355, dated 31st July 1861, wherein it was permitted that Captain (late Lieutenant) Weldon should occupy the building, late the District Engineer's Office, at a monthly rental of Rupees 25, I have the honor to report that it is probable the house will be vacated by the above Officer ere long, and to recommend that C. G. Walker, Esq., Acting Junior Assistant to Collector of Coimbatore, who has applied for permission to rent the building, be permitted to occupy the house at a monthly rental of Rupees 25, from the date upon which the present occupant vacates it.

1 Original letter.

Submitted for the information of Government, with reference to their Proceedings, No. 1,510, dated 9th August 1861.

2. The District Engineer has been authorized to rent the building to Mr. Walker on the proposed terms, which are in accordance with that sanctioned by Government in their Proceedings, No. 1,388, dated 2nd July 1860.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 52. ORDER THEREON, 2nd May 1862, No. 915.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 53. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Work Department, dated Chepauk, 1st March 1862, No. 181 :—

SIR,

1. I have the honor to lay before Government the project so often brought under discussion in previous years, for connecting the Chilka lake with the Ganjam river, close to the Port of that name.

1 Letter from Collector No. 22, dated 12th February 1862,
1 Do. from District Engineer No. 363, dated 10th February 1862.
1 Abstract estimate Rupees 90,000.
1 Report.
1 Survey of levels.
1 Sketch map.

2. The estimate now submitted amounts, for the simple operation of excavating the Canal designed for this purpose, to Rupees 90,000.

3. The correspondence and documents connected with this project are so voluminous, and extend over so considerable a period of time, that reference to their contents would entail a very great sacrifice of time; therefore, while I enclose them entire that they may serve such a purpose, it is necessary that I should summarize the information they convey in order that Government may be in a position to judge of the scheme according to its true merits.

4. The Chilka lake or backwater, is an extensive inlet or lagoon in the province of Ganjam, opening to the sea by a narrow outlet or creek, and hence, though constituting a basin of drainage for a considerable extent of country, receiving an influence from the Bay of Bengal, which renders its waters more or less brackish, its northern and western shores border a richly producing country, from which vast supplies of grain, oilseeds, and other staple articles of

Indian commerce are continuously exported in boats towards the considerable market of Ganjam; which, however, they are only able to reach under the grave disadvantage of having to be landed at the port of Rumbah at the southern extremity of the lake, and conveyed thence by carts over an intervening space of 9 miles of land carriage.

5. This obvious drawback to the free-spread and elasticity of trade it is proposed to remove by cutting a Canal which shall run from tide-water to tide-water in the lake and in the river of Ganjam; and which will pass along a line of country peculiarly well suited for the economical construction of such a work, inasmuch as its soil is alluvial throughout, and the greatest depth of cutting which its configuration will entail will be only 13 feet 11 inches.

6. I have remarked upon the beneficial effects which this measure can scarcely fail to produce upon trade, and consequently upon the prosperity not only of Ganjam but of the adjoining Bengal province of Cuttack; and I may also add that the result of its operation will be calculated to repay Government in a still more direct manner for whatever reasonable outlay it may involve them in. The Ganjam Salt pans produce a description of article which is peculiarly popular inland; at present as the cost of transport by carts is more than 120 per cent. in excess of that by water the quantity conveyed by return bandies to the Port of Rumbah for shipment on board the produce boats, is of necessity comparatively small, as the cart owners seek a more remunerative traffic inland. But if the cargo boats of the Chilka lake were enabled to discharge their goods in the Ganjam river they would almost invariably load back wholly or in great part with an article which pays their owners so good a freight as Salt: and the profit to Government by its augmented sale would be great and immediate.

7. The consequence of increased facility and economy in the mode of transit to a market could not fail to enhance the demand for all articles of consumption and of export. English manufactured goods and luxuries would find their way more readily into the interior, and the general development of the resources of the District would be greatly stimulated.

8. The amount of the estimate may appear considerable, showing as it does a probable cost of Rupees 9,500 per mile of canal excavated. But it must be borne in mind that compensation for land which it will occupy, forms a large item in the gross charge. The cost of labor also has very much increased in Ganjam of late years; and I have further thought it necessary to enter in the estimate a larger sum than usual for contingencies, under the apprehension of drifts of unfavorable soil being met with in the line of excavation.

9. I trust, however, Government will not consider the total amount as at all incommensurate with the great advantages which the scheme promises, and which the Collector, the District Engineer, and every individual (even to writers in the journals of London in 1859) who has been in any way connected with it since 1856 when it for the first time assumed a practical form, all concur in extolling.

10. The Canal is planned so as to carry at the lowest level of ordinary tides a depth of three feet of water, sufficient to float the craft now employed in the navigation of the Chilka lake, and which would therefore at once be available to traverse the new projected line of communication.

11. The only point upon which a question can be in any way raised is as to the necessity of placing locks at either end of the Canal. It certainly is not desirable to introduce such an impediment to free and unrestrained traffic; and I am induced to believe that Government will consider the presumption fair that no necessity for such constraint is, according to existing lights, apparent.

12. The Collector apprehends that the stream of the Ganjam river which manifests a yearly increasing tendency to push its embouchure more and more towards the north, may, profiting by a temporary superiority of head during the southerly monsoon, the winds of which have a tendency to lower the level of the Chilka waters, usurp the line of outlet offered by the Canal, and empty itself into the lake; submerging, as Mr. Forbes augurs, considerable tracts of circumjacent land in its course.

13. In this apprehension however I do not share. A simple groyne placed near the head of the Canal would sufficiently divert the stream to prevent any thing beyond a mere flow being perceptible along its Channel; and the reaction produced by the confinement of its volume in the contracted space of the Canal, would assist the natural tendency to disgorge itself by the ordinary outlet.

14. Moreover a project is now under investigation to rectify the Channel, which the river in question has of late years assumed, by carrying groynes or stone jetties across the space now occupied as the elbow of the stream; and cutting an artificial opening, or rather re-establishing the ancient opening, for the river's disembouguement. The position of these training revetments I have roughly noted on the plan of the locality. I am by no means sanguine as to the general result of the project, which originates with the Acting District Engineer to whom I have had to remit it for alterations; but I anticipate that its effect will certainly be to arrest the apprehended tendency of the river to invade the position assigned to the head of the projected Canal.

15. That the Ganjam river may eventually resume a northerly set is, I fear, not improbable; but I am disposed to think its encroachment in that direction will not be appreciable until the line of the coast shall have advanced to adapt itself to the new configuration, which may be as it were, forced upon it; and the backwater, which the old Channel will then constitute, will I anticipate rest undisturbed.

16. At all events I consider that the Canal may be safely excavated as a low-tide cut according to the design and specification of the District Engineer; leaving, as I think we may do without apprehension of ill results, the future to decide as to the necessity of providing it with locks; and feeling no apprehension as to their efficiency if added at an after stage of operations, when, and if, that necessity shall have been established.

17. Should Government see fit to sanction this project the amount of the estimate could be appropriated out of the Reserve Fund of the ensuing Budget, or out of the 1 per cent. Income Tax Fund, Rupees 6,000 being allotted for expenditure during the current year, and Rupees 30,000 for 1862-63.

18. The District Engineer proposes to expend Rupees 9,000 before the close of the current year, but by the time sanction, if accorded, is conveyed to him, time will not I expect admit of this.

MEMORANDUM.

1. On looking over this Project it appears to me that it will be scarcely safe to have the Canal open to the effects of the variations of level which take place in the Chilka Lake and Ganjam River.

2. From the Section it appears that the monsoon level of the Lake is 5′ 3″ higher than in the month of January, at which time the water in the Lake stood on a level with *low* water mark in the Ganjam river. If so, there would be a rush at every ebb tide through the Canal due to this level, and when the Lake falls a current will run the other way arising from the rise of the flood tide.

3. I fear that the Canal if unprotected will be liable to have its banks much worn at one time, and its bed irregularly acted upon at another. Whereas if the guard Locks are constructed all fear of damage may be averted.

4. I do not consider the Locks will afford any obstruction, at all events not more than would be felt by the current, which will otherwise be experienced by the ebb and flood tide.

5. I do not think the Collector's apprehensions as to the shifting of the mouth of Ganjam river need have much weight in the question of an open Canal, if it should be adopted.

6. If the Locks are constructed the excavation of the Canal will be considerably reduced, as then it may always be kept at the level of high tide, and instead of excavating to 5 feet below low water mark, which I am sure will be found, a very troublesome and expensive operation, it will not be necessary to excavate to more than 1 foot below that level to 4 feet of the most expensive digging will thus be saved, which ought to reduce the average rate for earth work

considerably; but even supposing the same rate to be maintained, the cost of the Locks will be met by the reduction in cost of excavation, so that for the same expenditure we should avoid all risk of injury to the Canal and have at the same time a still-water Canal.

7. I think also that a toll should be levied upon it from the first, as the proposed outlay is considerable.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 54. MINUTE BY THE HONORABLE THE PRESIDENT.

1. The project for connecting the Chilka lake with the Port of Ganjam has been often discussed, and I have gone over the various recommendations with relation to this work, most of which, however, I regret to observe, adopt the form of vague general statements: that the work is sure to pay; that the cost is trifling, the return sure to be large from the large amount of land, the produce of which will certainly seek an outlet by the Port of Ganjam were this Canal once made. These, however, are not the sort of statements upon which the Government could venture to expend large sums of money, and the first thing with which we ought to be furnished is a decent estimate of the quantity of produce likely to seek an outlet by way of the Canal. The District Engineer puts this at 14,300 tons, and at the rate proposed by the Chief Engineer, viz., 4 Annas per ton, the return would be 3,570 Rupees; and as the estimate amounts to 90,000 Rupees the return as interest on capital is not 4 per cent. This, I may remark, is the gross *direct* return according to the data furnished, and there would of course be many deductions for the cost of collection, the repairs which would be required on nine miles of Canal, &c. It may be said that there will be an indirect return in consequence of the extension of the trade in Salt, and this may very probably be the case; but something in the shape of an estimate should be sent in of the probable increase.

2. With reference to the character of the work, I agree with the Chief Engineer that locks cannot be dispensed with when the level of the water at the two ends of a short Canal is so variable as is reported. It would seem that during the monsoon the Chilka lake is about 1′ 6″ above the high-water mark in the Ganjam river, or 6′ above the low-water mark. Again, the low water level of the Chilka lake is 2′ below *low* water in the river or 6′ 6″ below high water, so that at different seasons there would be a fall of 9 inches per mile, or thereabouts, in the Canal, sometimes towards the river, sometimes towards the lake.

3. I think that the surface of the Canal might be kept at that of the high-water neap tides; the depth may be 5 feet, as the first class boats draw 4 feet water when loaded. The Locks need not be larger than sufficient to pass such boats, say, 55 or 60 feet long, by 10 feet wide. The estimate, when revised, may exhibit an amount which would justify the Government in commencing the work; at present it appears unlikely to pay.

4. I am by no means certain that it would not be better worth our while to undertake the general scheme alluded to by Colonel Cotton and to make the Chilka lake a fresh water Basin. But I have such a well-founded distrust of these vague propositions that I should wish the subject to be more fully reported on. In the meantime I am of opinion that the Government would not be justified in expending 90,000 Rupees upon a work the returns from which appear to be so scanty and uncertain.

(Signed) W. T. DENISON.

No. 55. ORDER THEREON, 2nd May 1862, No. 916.

1. With the above letter the Deputy Chief Engineer, Northern Circle, submits a project for a Canal to connect the Chilka lake with the Ganjam river at an estimated cost of Rupees 90,000. This work has been for some years before the notice of Government, but the consideration of it has, for financial reasons, been hitherto postponed. Along the Chilka lake a large traffic is carried on by boats which are now obliged to unload their cargoes at the village of Rumbah, from whence they are conveyed by bandies for a distance of nine miles to the port of Ganjam.

2. The present project is for the purpose of obviating this inconvenience and enabling the boats to proceed the whole way to Ganjam.

3. The Canal has from the first been warmly advocated by all the Revenue and Engineer Officers who have been connected with the Ganjam District; but a difference of opinion exists as to the mode in which it should be carried out.

4. The local Officers and the present Deputy Chief Engineer advocate an open Canal without locks. This proceeding necessitates the excavations being made much deeper, while from the fluctuating level of the waters of the lake and the tide at Ganjam, there will be always a current either one way or the other through the Canal.

5. By the construction of locks on the other hand, it is argued that, the depth of excavation may be reduced one yard, that yard being below low-water mark the most troublesome and expensive.

6. The Collector is apprehensive that if the Canal is left open, the embouchure of the Ganjam river may be shifted still further north and be more difficult to control than even at present. The Governor in Council is not disposed to consider the latter objection of much weight, but he questions the desirability of leaving the Canal open to the irruptions of the river on the one side and the flood waters of the lake on the other. The expense of constructing locks and of excavating the open Canal to the requisite level below low-water, the Chief Engineer shows, will be about the same, while the labor of the latter will be unquestionably greater.

7. The aggregate outlay being considerable, and the benefit of the Canal being confined exclusively to navigation, the Government consider that a return should be obtained for those benefits by means of a toll.

8. The late District Engineer states, it is observed, that the cost of the land carriage varies from 1 Anna to Annas 2, Pice 8 per bag, or from 14 Annas to Rupees 2-6-0 per ton. The toll proposed by the District Engineer, viz., 1 Anna per bag, would be too high. The Government consider that 4 Annas per ton, the same as charged on the Eastern Coast Canal, would be sufficient, especially if the Canal is of such great importance as represented, asthe traffic should soon be much more than that mentioned by the District Engineer, viz., 2 lacs of bags, which amount to only 14,300 tons per annum. Neither the Collector nor the Deputy Chief Engineer advert to the subject of the toll, and the latter appears to look for the returns in increased sales of Salt. After a consideration of all the correspondence on the subject His Excellency the Governor in Council cannot but observe that the remunerative character of the work is based only on vague and general statements. Before entertaining so large an expenditure as now proposed, Rupees 90,000, it is necessary that the Government should be furnished with some reliable estimate of the quantity of produce likely to seek an outlet by way of the Canal. At the quantity given by the District Engineer, 2 lacs of bags, or 14,300 tons, and at the rate of toll above proposed, viz., 4 Annas per ton, the direct return would be Rupees 3,575, or under 4 per cent., and from this, deductions would have to be made for expense of collection, repair, &c.

9. The anticipated indirect returns from increased sales of Salt are doubtless probable, but an estimate of the possible amount should be given.

10. The Governor in Council agrees with the Chief Engineer in considering that the locks cannot be dispensed with when there is so much variation in the levels of the water at either end of so short a Canal, and he is of opinion that the surface of the Canal may be kept at that of high water neap tides with a maximum depth of 5 feet. The size of the locks, however, may be reduced to 60 feet in length by 10 feet in width.

11. After the estimate has been revised according to the above directions, it should be submitted for the re-consideration of Government accompanied by some reliable estimates as to the probable amount of traffic and increase in the Salt Revenue.

12. The District Engineer's attention will be directed to the discrepancy between the measurements and tonnage of the boats, as given in paragraph 6 of his letter: a boat 48 feet long by 8 feet broad and drawing 4 feet of water will carry probably 38 tons and not 10½ as stated by him and the smaller boats in proportion.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 56. Read the following Proceedings of the Board of Revenue, dated 26th March 1862, No. 2,001 :—

Read the following letter from P. GRANT, Esq., Collector of Malabar, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, Madras, dated Calicut, 11th March 1862, No. 53.

SIR,

1. I have received Proceedings of Government, Public Works Department, and their Order thereon, dated 24th December 1861, No. 2,417.

2. Government sanction an outlay of Rupees 2,520 for the improvement of the Cannanore and Cavai so-called Canal, and authorize the introduction of the levy of tolls on boats making use of the same.

3. With all due deference, I would suggest that no tolls be levied until the Canal has been put in thorough order. Of the distance adverted to, a portion only consists of Canal; the rest is made up of the Baliapatam river and backwater, and as a whole, is an imperfect line of water communication. Few of the boats I suspect make use of the whole length of the line, as they are at times liable to interruptions in the navigation from want of depth of water. Once the impediments to free communication are removed, the people would not object to paying light tolls, but as things now are, they would look on them as a grievance.

4. Under the above circumstances, I beg that the Board will again bring the matter to the notice of Government, in view to ascertaining whether the imposition of tolls may not be deferred for a time. I feel confident that the public interests will be promoted by this course.

Ordered to be submitted to Government, with reference to the orders quoted by the Collector. Under the circumstances explained by him, the Board concur in considering that it will be advisable to defer the levy of any toll until all impediments to traffic are removed.

(A true Copy and Extract.)

(Signed) R. A. DALYELL, *Sub-Secretary.*

No. 57. ORDER THEREON, 2nd May 1862, No. 917.

The Government concur in opinion with the Board of Revenue, and accordingly direct that no toll should be levied until the Canal has been improved on the Estimate of Rupees 2,520, sanctioned in the Proceedings of Government, No. 2,417, dated 24th December 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 58. Read the following Proceedings of the Madras Government in the Military Department, dated 25th April 1862, No. 1,491 :—

Approving of the estimate for improving the ventilation of the Bombproof portion of the European Infantry Barracks at Trichinopoly. (Vide Military Proceedings, 25th April 1862, Nos. 498-499.)

No. 59. ORDER THEREON, 2nd May 1862, No. 918.

Communicated to the Deputy Chief Engineer, Southern Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 60. Read the following Proceedings of the Madras Government in the Military Department, dated 25th April 1862, 1,492:—

Approving of the estimate for constructing a temporary shed to be used as a double Skittle Alley in Fort Saint George. } (Vide Military Proceedings, 25th April 1862, Nos. 500-501.)

No. 61. ORDER THEREON, 2nd May 1862, No. 919.

1. Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

2. Lieutenant-Colonel Carpendale will be good enough to report the source from which funds for the execution of the work are to be obtained.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 62. Read the following Proceedings of the Madras Government in the Military Department, dated 25th April 1862, No. 1,482:—

Referring for certain information to his Excellency the Commander-in-Chief Proceedings Public Works Department regarding Perambore Lines. } (Vide Military Proceedings, 25th April 1862, Nos. 484-485.)

No. 63. ORDER THEREON, 2nd May 1862, No. 920.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for early attention, with reference to paragraph 3 of the Orders in the Military Department.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 64. Read the following Proceedings of the Madras Government in the Military Department, dated 25th April 1862, No. 1,490:—

Communicating letter from the Inspector General of Ordnance and Magazines, requesting to issue orders to the Public Works Department for the submission of estimates for the necessary work to set up Mortising and Planing Machines. } (Vide Military Proceedings, 25th April 1862, Nos. 496-497.)

No. 65. ORDER THEREON, 2nd May 1862, No. 921.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for early attention.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 66. Read the following Proceedings of the Madras Government in the Judicial Department, dated 25th April 1862, No. 656:—

Stating that application for exemption of the Officers of the Irrigation and Canal Company from serving as Jurors in the Sessions Court should have been made to the Collector of Cuddapah, and that in the event of the Collector's refusal the Court also may be applied to. } (Vide Judicial Proceedings, 25th April 1862, Nos. 202-203.)

No. 67. ORDER THEREON, 2nd May 1862, No. 922.

Communicated to the Consulting Engineer Irrigation and Canal Company, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 68. Read the following Proceedings of the Madras Government in the Ecclesiastical Department, dated 26th April 1862, No. 131 :—

Requesting to instruct the District Engineer, Presidency to lay down a stink trap in the Kitchen yard of the Garrison School. } (Vide Ecclesiastical Proceedings, 26th April 1862, Nos. 39-40.)

No. 69. ORDER THEREON, 2nd May 1862, No. 923.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for early attention with reference to paragraph 2 of the Orders in the Ecclesiastical Department.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 70. Read the following Proceedings of the Madras Government in the Educational Department, dated 25th April 1862, No. 111 :—

Sanctioning an addition of Rupees 8,596 to the grant of Rupees 9,000 made in aid of the erection of a School house at Calicut. } (Vide Educational Proceedings, 25th April 1862, Nos. 30-31.)

No. 71. ORDER THEREON, 2nd May 1862, No. 924.

Communicated to the Deputy Chief Engineer, Southern Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 72. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 16th April 1862, No. 12,763.

Read the following letter from Captain JOHN GODDARD, District Engineer of Coimbatore, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Ootacamand, 11th April 1862, No. 675:—

SIR,

1. In your letter No. 9,932, dated 28th January 1862, paragraph 3, you informed me that Rupees 3,079 of special allowance for roads not provided with maintenance grants might be used on the two roads from Coimbatore to the foot of the Coonoor Ghât and from Carboor to Konghiem when sanctioned by Government, so as to set free as much of my General Funds as possible to meet the demand on account of the Ootacamund Jail, if not already provided, for and you required me to report as early as possible the arrangements made by me to effect the same.

2. I replied to this requisition in paragraphs 12 and 13 of my letter No. 558, dated 6th February 1862, subsequently printed with Proceedings Madras Government, No. 450, dated 17th March 1862, communicated with order from Audit and Account Department, Central Office, No. 11,875, dated 24th March 1862.

3. The Government Proceedings above quoted passes no order whatever upon the expenditure of this Rupees 3,079, and it is now too late (supposing the anticipated sanction to arrive) to expend the amount before the 30th April 1862.

4. In addition to the above an estimate amounting to Rupees 1,000 to be met out of special allowance for roads not provided with maintenance grants which provided for the construction of two covered drains, and raising and metalling the road from Caroor to Vongul submitted originally on 28th December 1861, returned with your letter, No. 9,932, dated 28th January 1862, and re-submitted on 6th February 1862,* has not yet been sanctioned, and it is too late (supposing the anticipated sanction to arrive) to expend this amount before 30th April 1862.

* District Engineer's letter, No. 558, dated 6th February 1862.

5. I have the honor to recommend the aggregate of the above two amounts, viz., Rupees 4,079, to be expended upon famine relief at once. The Government ordered in Proceedings Madras Government No. 537, dated 22nd March 1862, that Rupees 10,000 should be expended in current official year in famine relief provided the amount were available: but only Rupees 5,000 were sanctioned in Proceedings Madras Government No. 698,† dated 3rd April 1862, on account of shortness of funds; and if sanction for Rupees 4,079, to be expended in famine relief, be accorded by Electric Telegraph it would be highly advantageous, and I have therefore the honor to solicit your immediate submission of this proposition for the sanction of Government and an intimation of their order by Telegraph.

† Communicated in Deputy Chief Engineer's order, No. 12,379, dated 5th April 1862.

Submitted to Government with the intimation that the District Engineer Coimbatore has been instructed by Telegram to expend the available balance of Rupees 4,079 on works intended to afford relief to the suffering poor in that District, with reference to an application now before the Chief Engineer from the Board of Revenue, for a further sum being granted for the above object, in addition to the 10,000 Rupees, which the Government had resolved on granting, from the balance at the credit of the Reserve Fund. The Deputy Chief Engineer, Southern Circle, trusts that this proceeding will meet with approval.

Dated 11th April 1862, No. 2,440.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 73. ORDER THEREON, 2nd May 1862, No. 925.

1. The Deputy Chief Engineer's Proceedings as reported in the foregoing Endorsement is approved.

2. The Government would remark with reference to paragraph 3 of the District Engineer's letter No. 675, dated 11th April 1862, that no distinct application having been made, either in *that* Officer's letter No. 558, dated 6th February last, or in the Chief Engineer's Endorsement thereon, for sanction to incur an expenditure of Rupees 3,079 on the works marginally noted, in addition to the grant of Rupees 4,600 made in Proceedings No. 165, dated 8th idem, no notice of the subject was taken in their Orders No. 450, dated 17th March.

Road from Coimbatore to the foot of the Coonoor Ghât.
Road from Caroor to Kongbiem.

3. With respect to paragraph 4 of the District Engineer's letter, the Government observe that the estimate, amounting to Rupees 1,000, for the construction of two covered drains and for raising and metalling the road from Caroor to Vengul has not yet been submitted for sanction by the Deputy Chief Engineer, Southern Circle.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 74. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Fort Saint George, 25th March 1862, No. 99 :—

SIR,

1. With reference to the Proceedings of Government of the 4th December 1861, No. 2,233, passing the Store Accounts of the Company up to 30th June 1860, I have the honor to submit a further Account Current of Stores for the half year ending 31st December 1860. In support of the entries on the Debtor and Creditor sides of the Account Current, the Agent furnished two separate Statements, showing the quantity and description of the articles received and issued. These Statements being in minute detail, and very lengthy, an Abstract of them has been prepared showing only the total value of Stores received and issued under each main head adopted in the Agent's books.

Main heads.	Balance on the 1st July 1860.			Received during the half year.			Total.			Issued during the half year.			Balance on the 31st December 1860.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Instruments...	18,175	11	7	3,246	10	11	21,422	6	6	2,332	0	3	19,090	6	3
Stationery...	7,459	12	3	2,052	12	4	9,512	8	7	1,898	2	5	7,614	6	2
Furniture....	893	15	7	3,036	15	10	3,930	15	5	1,089	13	0	2,841	2	5
Earth work and mason's tools	21,057	7	9	7,686	6	9	28,743	14	6	4,734	4	8	24,009	9	10
Blasting tools...	2,923	10	11	8,967	3	5	11,890	14	4	1,381	4	11	10,509	9	5
Brickmaking tools... ...	950	15	0	175	0	0	1,125	15	0	...	...	...	1,125	15	0
Brickwork tools, ...	...	...	...	22	0	0	22	0	0	3	0	0	19	0	0
Carpenters & Smiths do.	8,577	1	3	3,100	14	10	11,678	0	1	1,517	15	11	10,160	0	2
Machines and Fitting-shops, &c...	7,226	11	9	2,500	0	0	9,726	11	9	107	7	0	9,619	4	9
Miscellaneous.	8,774	15	6	6,208	5	3	14,983	4	9	1,358	15	10	13,624	4	11
General Stores...	21,690	1	9	15,541	1	11	37,231	3	8	891	14	7	36,339	5	1
Timber and wood... ...	645	8	8	17,438	12	7	18,084	5	3	415	13	0	17,668	8	3
Tents...	8,747	2	7	1,325	0	0	10,072	2	7	815	3	4	9,256	15	3
Accounting books and Forms.	2,370	11	10	938	0	0	3,308	11	10	275	6	2	3,033	5	8
Total...	1,09,493	14	15	72,239	3	10	1,81,733	2	3	16,821	5	1	1,64,911	13	2

2. From this it will be observed that the total value of Stores received during the latter half of the year 1860, amount to Rupees 72,239-3-10, of which Rupees 70,981-0-7 are for Stores purchased by the Agent and by the Engineers in the Divisions, under the sanction conveyed in the Proceedings* of Government, dated 17th April 1860; Rupees 470-12-0 are for articles manufactured and brought to account, and the remainder Rupees 787-7-3 are the value of articles previously issued from, and returned into the Stores during the half year for which the Account Current is rendered.

* No. 792.

3. The total value of Stores issued, amounting to Rupees 16,821-5-1, has been charged to the following heads :—

	RS.	A.	P.
Agency...	853	9	2
Engineering...	3,661	2	8
Construction...	6,996	13	11
General plant on works...	4,371	6	7
Store charges...	153	0	9
Do. on stores from England...	3	14	0
Medical Department...	0	14	2
Manufacture of Stores...	780	7	10
Total...	16,821	5	1

4. The Account Current and its Statements of particulars referred to above have been duly examined in my Office, and explanations obtained from the Agent for all doubtful items, as will be seen by the Memorandum of my audit thereon herewith forwarded.

5. From the commencement up to 31st December 1860, the expenditure on manufacture of Stores is Rupees 14,724-9-2, of this sum articles to the value of Rupees 470-12-0 are brought to account for the first time in the present Store Account Current, leaving Rupees 14,253-13-2 to be still accounted for. This sum the Agent states "must be held in suspense until particulars of the cost of articles manufactured in the Divisions is obtained" by him. I have called the particular attention of the Agent to the early adjustment of the same.

6. It will be observed that the accounts now submitted comprize the transactions up to 31st *December* 1860. The subsequent Account Current up to 30th June 1861, has also been forwarded by the Agent, but its submission to Government is deferred pending the receipt of Abstract Statements similar to that entered above.

No. 75. ORDER THEREON, 2nd May 1862, No. 926.

In their Order of 4th December 1861, No. 2,233, the Government noticed the large amount of stock on hand and also the delay in the submission of the accounts. The present accounts also are open to the same remark. The value of stock on hand amounts to Rupees 1,64,912. The Consulting Engineer will be requested to see that articles in excess of probable requirements are not purchased and retained in Store for any length of time. The accounts for the two half years in 1861 are now overdue, and it is hoped that they will be submitted at an early date.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 76. Read the following Proceedings of the Madras Government in the Judicial Department, dated 28th April 1862, No. 674:—

Sanctioning the estimates for constructing two Second Class Police Stations at Seetanagram and Yellamanchelly in the Vizagapatam District. } (Vide Judicial Proceedings, 28th April 1862, Nos. 238 @ 240.)

No. 77. ORDER THEREON, 3rd May 1862, No. 927.

Communicated to the Acting Deputy Chief Engineer, Northern Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 78. Read the following Proceedings of the Madras Government in the Revenue Department, dated 28th April 1862, No. 910:—

Requesting that orders may be issued for the preparation of estimates for the construction of Latrines and for the execution of other improvements and additions required for the Office of the Conservator of Forests. } (Vide Revenue Proceedings, 28th April 1862, Nos. 380-381.)

No. 79. ORDER THEREON, 3rd May 1862, No. 928.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for early attention.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 80. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 17th April 1862, No. 12,809:—

SIR,

1 Letter from the District Engineer, South Canara, No. 230, dated 1st April 1862, with one enclosure.
1 Do. No. 192, dated 22nd January 1862, with one enclosure.

1. I have the honor to forward two letters as per margin from the District Engineer, South Canara, reporting the occurrence of a fire on the 20th December last in the Táluq of Upinungadi, by which tools belonging to the Department Public Works valued at Rupees 90-13-8 were destroyed.

2. From the report furnished by the Tahsíldár the fire appears to have originated in the Blacksmith's shed attached to Range No. 2 while in the act of forging a red hot iron a spark of which flew to the roof which speedily ignited and spread, destroying the Police station house, the roof of the store, and the pandal erected in front of the Kacheri.

3. The fire being purely accidental, I request that the authority of Government may be accorded for the stores which have been destroyed amounting in value to Rupees 90-13-8 being written off the books.

No. 81. ORDER THEREON, 3rd May 1862, No. 929.

* Rupees 90-13-8.

The Government grant authority for the value* of the tools belonging to the Public Works Department in South Canara, destroyed by fire on the 20th December last, being written off to "profit and loss."

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 82. Read the following letter from Major H. W. RAWLINS, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 28th March 1862, No. 12,059:—

SIR,

1 Memorandum.
1 Letter from District Engineer North Arcot, 16th January 1862, No. 1,250.
1 Do. from Mr. Curley, 20th March 1862, with one enclosure.
1 Do. from Mr. DeCruz, 21st March 1862.
1 Do. from Mr. Plumbe, 24th March 1862.

1. The Accountant General has addressed this Office about the adjustment of a balance of Rupees 1,575, outstanding in his books against Colonel J. H. Bell, when Secretary to the late Board of Revenue, Department Public Works.

2. It will be seen from the accompanying Memorandum that the above sum represents the advances made for Levelling instruments and Gravatt's Levelling Staves manufactured at Madras, between the years 1849 and 1855. From the enclosed letters from Messrs. Plumbe and D'Cruz, the parties through whose means the articles were procured, it will be observed that the advances were fully worked out. I have used all possible means for ascertaining whether such was the case; but I have not succeeded in finding any voucher satisfactorily accounting for the receipt and distribution of the articles. The advances were made by, and the articles were supplied to the late Board of Revenue Department Public Works, prior to the time* that Mr. Curley assumed charge of the Store Department, and hence the difficulty experienced at present in affording more satisfactory explanation of the matter. It will be observed from the letter from the District Engineer of North Arcot, herewith forwarded, that Mr. O'Hara. when in charge of Public Works Stores in 1854 and 1855, recollects having received thirty Staves from Mr. D'Cruz, and the remaining twenty must have been previously supplied on the first advance of Rupees 350 made in 1852. Mr. Plumbe states that the Levelling instruments were all delivered to Mr. Wylie, late Manager of the Board of Revenue, Department Public Works, to whom also, Mr. D'Cruz states, were delivered all Staves supplied about the same time.

* February 1857.

16th January 1862, No. 1,250.

3. As the advances are outstanding and it is expedient that they should be speedily adjusted, I request that sanction may be granted for writing off the sum of Rupees 1,575, in the books of the Accountant General.

No. 83. ORDER THEREON, 3rd May 1862, No. 930.

1. Under the circumstances represented in the foregoing letter the Government authorize the sum of Rupees 1,575 being written off to profit and loss.

2. It is observed that the above sum represents the amount of certain advances made by Colonel Bell (when Secretary to the late Board of Revenue, Department Public Works, and now standing to his debit in the books of the Accountant General) on account of Levelling instruments and Staves contracted for by Messrs. Plumbe and D'Cruz. The Officer in charge of the Audit and Account Departments states that although no vouchers can be traced to prove that the articles were delivered by the parties abovementioned yet it is believed that the advances were duly worked out by them.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 84. Read the following List from the Officer in charge of the Audit and Account Departments:—

List of works executed without estimate and on emergency under 50 Rupees passed in the Audit Department of the Central Office in the months of January, February and March 1862, submitted with reference to the Proceedings of Government, dated 27th December 1861, No. 2,393. } (Here enter 19th April 1862, No. 12,869.)

No. 85. ORDER THEREON, 3rd May 1862, No. 931.

The Officer in charge of the Audit and Account Departments of the Central Office will be good enough to report, with reference to the Bills for minor earth repairs to works of Irrigation, shown in the foregoing List to have been passed in the Central Office during the quarter ended 31st March 1862, whether, in accordance with the provisions of Chapter XI of the New Code, reference was made to the District Engineers concerned to ascertain why such works had not been executed by the Ryots, and if so, with what result. Short notes furnishing the information now called for will be inserted in all future Lists submitted to Government in pursuance of their Orders No. 2,393, dated 24th December 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 86. Read the following Proceedings of the Madras Government in the Judicial Department, dated 26th April 1862, No. 662:—

Referring for the opinion of the Advocate General the question of obtaining possession of the property of Prisoner Francis Lina D'Almeida sentenced for seven years' penal servitude at Tellicherry for forgery. } (Vide Judicial Proceedings, 26th April 1862, Nos. 213 @ 215.)

No. 87. ORDER THEREON, 3rd May 1862, No. 932.

Communicated to the Deputy Chief Engineer, Southern Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 88. Read the following Proceedings of the Madras Government in the Public Department, dated 28th April 1862, No. 512:—

Sanctioning the continuance of the monthly allowance of Rupees 60 for carriage hire to Mr. Doderet for a further period of two months. } (Vide Public Proceedings, 28th April 1862, Nos. 169-170.)

No. 89. ORDER THEREON, 3rd May 1862, No. 933.

Communicated to the Chief Engineer, who will be good enough to report with reference to paragraph 2 of the Orders in the Public Department.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 90. Read the following Proceedings of the Madras Government in the Public Department, dated 26th April 1862, No. 504:—

Communicating letter from the Director of Public Instruction stating that Lieutenant-Colonel Carpendale is unable to spare any photographic apparatus and that Lieutenant Thompson is in possession of one. } (Vide Public Proceedings, 26th April 1862, Nos. 161-162.)

No. 91. ORDER THEREON, 3rd May 1862, No. 934.

Recorded, with reference to Proceedings of Government, No. 738, dated 11th April 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 92. Read the following Proceedings of the Madras Government in the Marine Department, dated 26th April 1862, No. 117:—

Sanctioning the estimate for constructing a Flag Staff at Mangalore. } (Vide Marine Proceedings, 26th April 1862, Nos. 57-58.)

No. 93. ORDER THEREON, 3rd May 1862, No. 935.

Communicated to the Deputy Chief Engineer, Central Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 94. Read the following Endorsement of the Officer in charge of the Audit and Account Departments, dated Chepauk, 9th April 1862, No. 12,486.

Read the following letter from Major J. F. STODDARD, Acting District Engineer, Godavery, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Dowlaishwaram, 12th February 1862, No. 1,236 :—

SIR,

I have the honor to forward two Bills amounting to Rupees 1,439-9-0 and Rupees 956-7-2 respectively, on account of the expenditure incurred in the months of October and November last, in fitting up, cleaning and painting certain Steamers and Paddle boats; also repairing, cleaning, and otherwise preparing three houses selected for the reception of His Lordship the Viceroy of India and Suite at Dowlaishwaram, and to request that you will be so good as to submit the same to the Government of Madras for the purpose of being forwarded for payment to the Government of India.

Bill for fitting and painting Steamers for use of His Lordship the Governor General of India, in the month of October and November 1861.

Description of charges.		Rate. RS.	A.	P.	Amount. RS.	A.	P.	Total. RS.	A.	P.
FITTING AND PAINTING STEAMERS.										
Steamer " Frank and Ado."										
Labour.										
3 Smiths	... each	0	4	5	0	13	3			
15½ Do.	... „	0	5	4	5	2	8			
3 Hammer men	... „	0	3	10	0	11	6			
9½ Do.	... „	0	2	9	1	10	1			
20 Vice men	... „	0	4	5	5	8	4			
44 Do.	... „	0	6	3	17	3	0			
3 Bellows Boys	... „	0	3	10	0	11	6			
9½ Do.	... „	0	1	5	0	13	6			
3 Vice Boys	... „	0	4	3	0	12	9			
24 Do.	... „	0	2	4	3	8	0			
9 Lascars	... „	0	4	0	2	[illegible]	0			
33½ Do.	... „	0	3	4	6	1[illegible]	8			
11 Moochies	... „	0	5	0	3	7	0			
6½ Carpenters	... „	0	5	8	2	4	10			
Materials.										
14 lbs. Round iron ½"	... „	0	1	3	1	[illegible]	6			
16½ lbs. Sheet iron	... „	0	1	6	1	8	9			
6¾ lbs. Cast steel	... „	0	10	0	4	3	6			
2 lbs. Lamp oil	... „	0	1	11	0	3	10			
¼ lb. Nails	... „	0	2	3	0	0	7			
1 Tin sheet	... „	0	1	7	0	1	7			
⅛ lb. Tin	... „	0	12	10	0	1	7			
⅛ lb. Salmoniac	... „	0	8	0	0	1	0			
$\frac{1}{16}$ lb. Do.	... „	0	10	8	0	0	8			
⅛ lb. Zinc...	... „	0	4	0	0	0	6			
1 lb. Soap	... „	0	3	0	0	3	0			
31 lbs. Red lead	... „	0	3	10	7	6	10			
56 lbs. White paint	... „	0	3	0	10	8	0			
56 lbs. Yellow paint	... „	0	2	4	8	2	8			
29 lbs. Linseed oil	... „	0	3	10	6	15	2			
6½ lbs. Turpentine	... „	0	12	0	4	14	0			
25 lbs. Black varnish	... „	0	6	0	9	[illegible]	0			
$\frac{1}{3}$ lb. Borax	... „	0	8	0	0	[illegible]	3			
3 lbs. Cotton rope	... „	0	5	0	0	15	0			

Bill for fitting and painting Steamers, &c. (Continued.)

Description of charges.		Rate. Rs.	A.	P.	Amount. Rs.	A.	P.	Total. Rs.	A.	P.
13 lbs. Coal Tar.	... each	0	2	0	1	10	0			
1 lb. Waste Hemp	... ,,	0	0	4	0	0	4			
½ lb. Thread	... ,,	0	8	0	0	4	0			
⅓ lb. Wax	... ,,	0	10	0	0	1	3			
¼ lb. Brass sheet	... ,,	0	12	8	0	3	2			
25 lbs. Copper Tacks	... 100	0	6	0	0	1	6			
2 Files	... each	1	10	8	3	5	4			
2 Do.	... ,,	1	0	2	2	0	4			
22 Screws	... ,,	0	0	2	0	3	8			
18 Do.	... ,,	0	0	3	0	4	6			
1 Sand Paper	... ,,	0	0	4	0	0	4			
1 Pot	... ,,	0	0	4	0	0	4			
2 Rags	... ,,	0	0	1	0	0	2			
66½ Yds. Dungaries	... ,,	0	5	0	20	12	6			
1 Foot coarse cloth	... ,,	0	1	2	0	1	2			
15½ Parrahs Wood Charcoal ...	... ,,	0	3	8	3	8	10			
4 Parrahs Palmyra Charcoal ...	... ,,	0	3	0	0	12	0			
Painting by contract	... ...	0	0	0	7	0	0			
Workshop general superintendence and sundries at 10 per cent. on Rupees 148-1-11	...	0	0	0	14	12	11			
					162	14	10			
Stores supplied.										
212 lbs. coils of Coir rope	... each	0	0	8	8	13	4			
32½ lbs. Cotton rope	... ,,	0	5	0	10	2	6			
56 lbs. Cocoanut oil	... ,,	0	2	8	9	5	4			
20 lbs. Castor oil	... ,,	0	2	8	3	5	4			
4 lbs. Grease	... ,,	0	3	4	0	13	4			
8 lbs. Do.	... ,,	0	3	3	1	10	0			
6 lbs. Waste Hemp	... ,,	0	0	4	0	2	0			
26 lbs. Hemp	... ,,	0	0	10	1	5	8			
4 lbs. Lamp oil	... ,,	0	1	11	0	7	8			
2 Yds. Dungary	... ,,	0	3	3	0	6	6			
Workshop general superintendence and sundries at 10 per cent. on Rupees 36-7-8	...	0	0	0	3	10	4			
					40	2	0			
								203	0	10
Steamer "Arthur Cotton."										
Labour.										
13 Vice men	... each	0	6	3	5	1	3			
10½ Do. Boys	... ,,	0	2	4	1	8	6			
15 Carpenters	... ,,	0	5	8	5	5	0			
4½ Apprentices...	... ,,	0	2	2	0	9	9			
15 Lascars	... ,,	0	3	4	3	2	0			
3 Moulders	... ,,	0	4	0	0	12	0			
6 Bellows Boys	... ,,	0	1	5	0	8	6			
3 Moochies	... ,,	0	5	0	0	15	0			
Materials.										
62 lbs. Old Copper	... ,,	0	10	3	39	11	6			
8 lbs. Tin	... ,,	0	12	10	6	6	8			
½ lbs. Zinc	... ,,	0	4	2	0	2	1			
2 lbs. Red ochre	... ,,	0	2	4	0	4	8			
2 lbs. Boiled Linseed Oil... ...	... ,,	0	3	10	0	7	8			
½ lb. Turpentine	... ,,	0	12	0	0	6	0			
4 lbs. Wrought nails	... ,,	0	4	0	1	0	0			
3 lbs. Country nails	... ,,	0	2	1	0	6	3			

Bill for fitting and painting Steamers, &c. (Continued.)

Description of charges.	Rate. RS.	A.	P.	Amount. RS.	A.	P.	Total. RS.	A.	P.
6 lbs. White paint ... ... each	0	3	0	1	2	0			
6 Crucibles ... ... ,,	0	1	6	0	9	0			
400 Tacks, iron 100	0	1	6	0	6	0			
72 Screws ... ... each	0	0	3	1	2	0			
6 Parrahs Wood Charcoal ... ... ,,	0	3	8	1	6	0			
Workshop general superintendence and sundries at 10 per cent. on Rupees 71-3-10	0	0	0	7	2	0			
							78	5	10
Steamer "Little Nell."									
Labour.									
$19\frac{3}{4}$ Smiths ... . each	0	5	4	6	9	4			
$14\frac{1}{2}$ Hammer men ... ... ,,	0	2	9	2	7	11			
$24\frac{1}{4}$ Bellows Boys ... ... ,,	0	1	5	2	2	4			
26 Carpenters ... ... ,,	0	5	8	9	3	4			
7 Apprentices... ... ... ,,	0	2	2	0	15	2			
13 Vice men ... . ,,	0	6	3	5	1	3			
7 Do. Boys ... ... ,,	0	2	4	1	0	4			
67 Lascars ... ... ,,	0	3	4	13	15	4			
20 Sail makers... ... ... ,,	0	3	4	4	2	8			
17 Moochies ... ... ,,	0	5	0	5	5	0			
131 Tailors ... ... ,,	0	4	0	32	12	0			
Materials.									
$140\frac{1}{2}$ lbs. Round Iron ... ... each	0	1	3	10	15	7			
33 lbs. Do. ... ... ,,	0	1	6	3	1	6			
$3\frac{1}{2}$ lbs. Pig Lead ... ... ,,	0	3	0	0	10	6			
21 lbs. Coal Tar ... ... ,,	0	2	0	2	10	0			
4 lbs. Red Lead ... ... ,,	0	2	3	0	9	0			
$28\frac{1}{2}$ lbs. White paint ... ... ,,	0	3	0	5	5	6			
12 lbs. Yellow paint ... ... ,,	0	5	4	4	0	0			
1 lb. Red Lead ... ... ,,	0	3	4	0	3	4			
10 lbs. Do. ... ... ,,	0	3	10	2	6	4			
32 lbs. Do. ... ... ,,	0	4	0	8	0	0			
$\frac{1}{4}$ lb. Prussian Blue ... ... ,,	2	0	0	0	8	0			
3 lbs. Turpentine ... ... ,,	0	12	0	2	4	0			
1 lb. Do. ... ... ,,	0	12	8	0	12	8			
28 lbs. Boiled Linseed Oil ... ... ,,	0	3	10	6	11	4			
$\frac{3}{4}$ lb. Soap ... ... ,,	0	3	0	0	2	3			
$\frac{1}{2}$ lb. Do. ... ... ,,	0	2	8	0	1	4			
8 lbs. Waste Hemp ... . ,,	0	0	4	0	2	8			
$\frac{1}{4}$ lb. Tin ... ... ,,	0	12	8	0	3	2			
$\frac{1}{8}$ lb. Salmoniac ... ... ,,	0	8	0	0	1	0			
$\frac{1}{8}$ lb. Iron wire ... . ,,	0	8	0	0	1	0			
$1\frac{1}{2}$ lb. Lamp oil ... ... ,,	0	1	11	0	2	11			
1 lb. Twisted thread ... ... ,,	0	8	0	0	8	0			
$\frac{1}{8}$ lb. Wax ... ... ,,	0	8	0	0	1	0			
$\frac{1}{4}$ lb. Do. ... ... ,,	0	10	0	0	2	6			
2 lbs. Country Nails ... ... ,,	0	2	1	0	4	2			
$1\frac{1}{2}$ lbs. Cotton Thread ... ... ,,	0	8	0	0	12	0			
$2\frac{3}{4}$ lbs. Cut Nails ... ... ,,	0	2	4	0	6	5			
$\frac{1}{4}$ lb. Country Twine ... ... ,,	0	2	0	0	0	6			
6 lbs. Coir rope ... ... ,,	0	0	5	0	2	6			
3 Files .. .. ,,	1	0	2	3	0	6			
2 Rubber valves ... ... ,,	1	12	8	3	9	4			
4 Paint Brushes ... ... ,,	0	10	0	2	8	0			
2 Glass panes ... ... ,,	0	2	0	0	4	0			
4 Red thread bundles ... ... ,,	0	0	6	0	2	0			
5 Tin Sheets ... ... ,,	0	1	6	0	7	6			
50 Iron tacks 100	0	2	8	0	1	4			
80 Do. ... ... ,,	0	1	3	0	1	0			

Bill for fitting and painting Steamers, &c. (Continued.)

Description of charges.		Rate. Rs.	A.	P.	Amount. Rs.	A.	P.	Total. Rs.	A.	P.
12 Yds. Curtain cloth	per Yd.	0	3	0	2	4	0			
2½ Yds. Red cloth	... „	0	7	6	1	2	9			
2½ Feet coarse cloth	... each	0	2	0	0	5	0			
23 Yds. Green Tape	20 Yds.	1	0	0	1	2	4			
2 Feet Europe Canvas	... „	0	8	0	0	5	4			
68 Yds. Dungaries	... „	0	5	0	21	4	0			
25 Yds. Do.	... „	0	3	3	5	1	3			
31 Parrahs Wood charcoal... ...	... each	0	3	8	7	1	8			
7 Do. Palnyra charcoal ...	... „	0	3	0	1	5	0			
22′ 1″ Cubic feet Pegue wood ...	...C. ft.	2	4	0	49	11	0			
142½ Sqr. feet Sawyer's hire ...	100 feet	1	5	4	1	14	5			
46 Screws	... each	0	0	3	0	11	6			
11 lbs. Cotton rope	... „	0	5	0	3	7	0			
3 Pairs Brass hinges	... „	0	5	0	0	15	0			
Workshop general superintendence and sundries at 10 per cent. on Rupees 241-11-9	...	0	0	0	24	2	9			
					265	14	6			
Stores supplied.										
24 lbs. Cocoanut oil	... each	0	2	8	4	0	0			
8 lbs. Grease...	... „	0	3	3	1	10	0			
4 lbs. Hemp...	... „	0	0	8	0	2	8			
6 lbs. Do.	... „	0	0	10	0	5	0			
½ lb. Boiled Linseed oil	... „	0	3	10	0	1	11			
2 Yards Coarse cloth...	... „	0	2	0	0	4	0			
12 lbs. ~~Lamp~~ oil...	... „	0	1	11	1	7	0			
1⅛ lbs Cotton Thread...	... „	0	8	0	0	9	0			
1 Small pot...	... „	0	0	4	0	0	4			
Workshop general superintendence and sundries at 10 per cent. on Rupees 8-7-11...	...	0	0	0	0	13	7			
					9	5	6	275	4	0
Steamer "Pioneer."										
Labour.										
16 Vice men...	... each	0	6	3	6	4	0			
17 Do. boys...	... „	0	2	4	2	7	8			
59 Lascars...	... „	0	3	4	12	4	8			
4½ Smiths...	... „	0	5	4	1	8	0			
2½ Hammer men...	... „	0	2	9	0	6	11			
5½ Bellow boys...	... „	0	1	5	0	7	9			
6 Carpenters	... „	0	5	8	2	2	0			
3 Apprentices	... „	0	2	2	0	6	6			
12 Moochies...	... „	0	5	0	3	12	0			
71 Lascars for bringing Steamer from Bezwada.	„	0	4	6	19	15	6			
1 Do. do.	... „	0	3	2	0	3	2			
1,200 Running feet caulking hire... ...	100 ft.	0	12	0	9	0	0			
131 Tailors..	... each	0	4	0	32	12	0			
Materials.										
55 lbs. White paint	... each	0	3	0	10	5	0			
1 lb. Do.	... „	0	2	8	0	2	8			
22 lbs. Red lead	... „	0	4	0	5	8	0			
68 lbs. Do.	... „	0	3	10	16	4	8			
[illegible] lbs. Prussian blue	... „	2	0	0	3	0	0			

Bill for fitting and painting Steamers, &c. (Continued.)

Description of charges.		Rate.			Amount.			Total.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
1 Engine Maistry for 16 days per month ...	...	12	0	0	6	6	5			
1 Steer man for 16 do. do. do. ...	...	8	0	0	4	4	3			
2 Firemen for 16 do. do. do. ...	...	7	0	0	7	7	6			
1 Lascar for 16 do. do. do. ...	...	6	0	0	3	3	2			
					29	5	4			
Fitting up and painting 3 Paddle Boats for the use of His Lordship's party.								145	12	10
Labor.										
187½ Carpenters	... each	0	5	8	66	6	6			
5 Smiths...	... „	0	5	4	1	10	8			
5 Hammer men...	... „	0	2	9	0	13	9			
18 Bellows boys...	... „	0	1	5	1	9	6			
72 Lascars...	... „	0	3	4	15	0	0			
2 Vice men...	... „	0	6	3	0	12	6			
39¾ Moochies...	... „	0	5	0	12	6	9			
2 Coolies...	... „	0	1	6	0	3	0			
1 Cooly...	... „	0	2	6	0	2	6			
1 Do.	... „	0	1	3	0	1	3			
Caulking by contract...	... ...	0	0	0	22	3	5			
Materials.										
1 lb. Cut nails	... „	0	2	4	0	2	4			
15 lbs. Chalk...	... „	0	0	8	0	10	0			
11½ Yards coarse cloth... ...	... yd.	0	2	6	1	12	4			
2 Do. do.	... „	0	2	0	0	4	0			
156 Screws...	... each	0	0	3	2	7	0			
8 Wood screws...	... „	0	0	6	0	4	0			
327½ lbs. Pitch...	... md.	2	1	3	27	3	7			
46 lbs. Lamp oil...	... each	0	1	11	5	8	2			
168⅔ Yards dungary cloth	... yd.	0	5	0	52	11	4			
12 lbs. Coal tar...	... each	0	2	0	1	8	0			
43 lbs. Red ochre.	... „	0	2	4	6	4	4			
1 Paint brush...	... each	0	10	0	0	10	0			
50 lbs. Boiled Linseed oil	... lb.	0	3	10	11	15	8			
58½ lbs. Wrought nails... ...	... „	0	4	0	14	10	0			
6 Rags...	... each	0	0	½	0	0	3			
15 Rags...	... „	0	0	¾	0	0	11			
⅜ lb. Wax...	... „	0	10	8	0	4	0			
119 lbs. White paint	... „	0	3	0	22	5	0			
28 lbs. Do.	... „	0	2	8	4	10	8			
4 lbs. Turpentine...	... „	0	12	0	3	0	0			
1 lb. Do.	... „	0	12	8	0	12	8			
22⅛ lbs. Cotton...	... „	0	2	6	3	7	4			
3⅛ lbs. Do.	... „	0	2	8	0	8	4			
3 lbs. Do.	... „	0	3	0	0	9	0			
7 Pots...	... „	0	1	0	0	7	0			
1 Do.	... „	0	1	3	0	1	3			
6 lbs. Black varnish	... „	0	6	0	2	4	0			
3,860 Iron tacks...	... 100	0	1	3	3	0	3			
5 Partahs wood charcoal... ...	.. Prhs.	0	3	8	1	2	4			
2 Teak tundoos...	... each	5	8	0	11	0	0			
1 Do.	... „	5	0	0	5	0	0			
1 Do.	... „	4	8	0	4	8	0			
1 Do.	... „	4	0	0	4	0	0			
6½ lbs. Sheet iron...	... „	0	1	6	0	9	9			
2⅛ lbs. Round iron...	... „	0	1	6	0	3	2			
5½ lbs. Do.	... „	0	1	3	0	8	1			
½ lb. Soap...	... „	0	3	0	0	1	6			
153 lbs. Coir rope...	... „	0	3	7	4	13	7			

Bill for fitting and painting Steamers, &c. (Continued.)

Description of charges.	Rate. RS.	A.	P.	Amount. RS.	A.	P.	Total. RS.	A.	P.
$8\frac{3}{16}$ lbs. Cotton rope ... ... each	0	8	0	4	1	6			
$\frac{1}{4}$ lb. Do. ... ... ,,	0	4	0	0	1	0			
20 lbs. Red lead... ... ... ,,	0	3	10	4	12	8			
$\frac{1}{4}$ lb. Hide... ... ... each	2	0	0	0	8	0			
1 lb. Prussian blue ... ... lb.	2	0	0	2	0	0			
1 lb. Do. ... ... ,,	1	12	0	0	14	0			
Hire for Sawyers for 395 square feet per... ... 100	1	5	4	5	4	3			
Workshop general superintendence and sundries on Rupees 338-3-1 at 10 per cent...	0	0	0	33	13	1			
							372	0	2
Sundries.									
1 Union Jack for His Excellency the Governor General's Steamer...	0	0	0	15	0	0			
Sundry flags for different steamers to attend His Lordship.									
32 Yards red cloth ... ... each	0	7	6	15	0	0			
6 Yards long cloth... ... ... ,,	0	4	0	1	8	0			
3 Yards coarse cloth ... ... ,,	0	2	6	0	7	6			
12 Balls thread... ... ... ,,	0	0	4	0	4	0			
$\frac{5}{8}$ lb. Cotton rope... ... ... lb.	0	5	0	0	1	10			
$7\frac{1}{4}$ lbs. Do. ... ... ,,	0	5	6	2	7	11			
13 Tailors... ... ... each	0	4	0	3	4	0			
Workshop superintendence and sundries... ..	0	0	0	2	0	11			
							40	2	2
Value of 16 tons firewood used for bringing Steamer "Pioneer" from Bezwada to Dowlaishweram at 3 Rupees per ton...	...	...	...	...	...	...	48	0	0
Rupees...							1,439	9	0

Godavery District Engineer's Office,
Dowlaishwaram, 12th Feby. 1862.

(Signed) J. F. STODDARD, Major,
District Engineer Godavery District.

Bill for repairing and fitting up and clearing three Bungalows for His Lordship's use.

Items.	Rate. RS.	A.	P.	Amount. RS.	A.	P.	Total. RS.	A.	P.
Repairing white-washing and fitting up two large and one small Bungalow for the use of His Lordship and Suite.									
Labor.									
1 Maistry for 1 month...	15	0	0	15	0	0			
21 Carpenters ... ... each	0	5	8	7	7	0			
$49\frac{3}{4}$ Do. ... ... ,,	0	4	0	12	7	0			
6 Apprentices ... ... ,,	0	2	2	0	13	0			
7 Moochies .. .. ,,	0	5	0	2	3	0			
1 Lascar ... ... ,,	0	3	4	0	3	4			
118 Tailors ... ... ,,	0	4	0	29	8	0			
67 Bricklayers ... ... ,,	0	4	0	16	12	0			
$14\frac{1}{4}$ Bearers ... ... ,,	0	5	0	4	7	3			
44 Coolies ... ... ,,	0	2	0	5	8	0			
53 Do. ... ... ,,	0	1	0	3	5	0			
							97	9	7
Materials.									
26 Teak wood posts .. .. each	3	0	0	78	0	0			
1 Do. ... . ,,	4	0	0	4	0	0			
2,060 Bamboos ... ... per 100	2	0	0	41	3	3			
1,500 Palmyra leaves ... ... ,,	0	4	0	3	12	0			
$\frac{1}{2}$ Garce ground chunam ... ... each	16	0	0	8	0	0			
10,000 Pantiles... ... ... per 1,000	1	8	0	15	0	0			
14 Vossunes ... ... each	0	8	0	7	0	0			
6 Jack rafters ... ... ,,	0	4	0	1	8	0			

Bill for fitting and painting Steamers, &c. (Continued.)

Description of charges.		Rate. Rs.	A.	P.	Amount. Rs.	A.	P.	Total. Rs.	A.	P.
6 lbs. Turpentine...	each	0	12	0	4	8	0			
28 lbs. Yellow paint...	,,	0	5	4	9	5	4			
14 lbs. Black varnish	,,	0	6	0	5	4	0			
2 lbs. Paint brushes	,,	0	10	0	1	4	0			
45½ lbs. Boiled Linseed Oil...	,,	0	3	10	10	14	5			
12 lbs. Lamp Oil	,,	0	1	11	1	7	0			
8 lbs. Cocoanut Oil...	,,	0	2	8	1	5	4			
10 Covedy Ropes.	,,	0	1	0	0	10	0			
2 lbs. Coir rope...	,,	0	0	8	0	1	4			
1/16 lbs. Rosin	,,	0	1	2	0	0	1			
2 lbs. Twisted Thread...	,,	0	8	0	1	0	0			
4 lbs. Grease...	,,	0	3	3	0	13	0			
1⅞ lbs. Soap...	,,	0	3	0	0	5	7			
26½ lbs. Cotton Rope..	,,	0	5	0	8	4	6			
⅛ lb. Chalk line...	,,	0	8	0	0	1	0			
1¼ lbs. Cut Nails.	,,	0	2	4	0	2	11			
¾ lb. Tin...	,,	0	12	10	0	9	7			
½ lb. Do.	,,	0	12	0	0	6	0			
11 lbs Coal Tar...	,,	0	2	0	1	6	0			
¼ lb. Iron Wire	,,	0	8	0	0	2	0			
¾ lb. Borax	,,	0	8	0	0	6	0			
6 3/16 lbs. Sheet Copper...	,,	0	13	0	5	0	5			
37½ lbs. Pitch...	md.	2	1	3	3	1	11			
6½ lbs. Cotton...	each	0	2	6	1	0	3			
1¾ lb. Zinc...	,,	0	4	2	0	7	3			
1 File...	,,	1	0	2	1	0	2			
⅛ lb. Salmoniac.	,,	0	10	0	0	1	3			
⅛ lb. do.	,,	0	8	0	0	1	0			
36 Yds. Dungaries...	12 yds	3	12	0	11	4	0			
1 Do. do.	,,	0	3	3	0	3	3			
5 Do. Coarse cloth	,,	0	2	0	0	0	0			
2 Feet Do.	feet	0	0	10	0	1	8			
1 Feet Do.	,,	0	1	3	0	1	3			
2 Brooms...	each	0	0	2	0	0	4			
1 Small pot...	,,	0	0	4	0	0	4			
1 Large pot	,,	0	1	0	0	1	0			
6½ Parrah Wood charcoal...	,,	0	3	8	1	7	0			
1 Crucible...	,,	0	1	6	0	1	6			
4 lbs. Waste Hemp	,,	0	0	4	0	1	4			
34 Screws...	,,	0	0	3	0	8	6			
1 Yard blue cloth	yd	0	4	7	0	4	7			
3 Do. red cloth...	,,	0	7	6	1	6	6			
17½ Do. green chintz...	,,	0	5	4	5	12	0			
¾ Do. long cloth	each	0	4	0	0	3	0			
1/16 lb. Wax......	,,	0	10	8	0	0	8			
4 lbs. Chalk	,,	0	0	8	0	2	8			
1 Empty paint bucket	,,	0	6	0	0	6	0			
Workshop general superintendence and sundries at 10 per cent. on Rupees 208-11-3...		0	0	0	20	13	11			
					229	9	2			
Stores supplied.										
20 lbs. Cocoanut oil...	each	0	2	8	3	5	4			
8 lbs. Lamp oil...	,,	0	1	11	0	15	4			
6 lbs. Grease..	,,	0	3	3	1	3	6			
8 lbs. Hemp...	,,	0	0	10	0	6	8			
1 lb. Cotton Thread	,,	0	8	0	0	8	0			
1 Pot...	,,	0	1	0	0	1	0			

Bill for fitting and painting Steamers, &c. (Continued.)

Description of charges.	Rate. RS.	A.	P.	Amount. RS.	A.	P.	Total. RS.	A.	P.
1 Yard Dungary ... . each	0	3	3	0	3	3			
Workshop general superintendence and sundries at 10 per cent. on Rupees 6-11-1... ...	0	0	0	0	10	8			
				7	5	9	226	14	11
Steamer "Prince."									
Stores supplied.									
27½ lbs. Cotton rope... .. .. each	0	5	0	8	9	6			
122½ lbs. Coir rope... ... ... ,,	0	0	8	5	1	8			
43¼ lbs. Hemp rope... ... ... ,,	0	1	6½	4	2	8			
52 lbs. Cocoanut oil... ... ... ,,	0	2	8	8	10	8			
12 lbs. Grease... ... ... ,,	0	3	3	2	7	0			
10 lbs. Red Lead... ... ... ,,	0	3	10	2	6	4			
20 lbs. Hemp... ... ... ,,	0	0	10	1	0	8			
2 Yds. Dungaries... ... ... ,,	0	3	3	0	6	6			
¾ Soap... ... ... ,,	0	3	0	0	2	3			
10 lbs Lamp oil. ... ... ,,	0	1	11	1	3	2			
2 Yards Dungaries... ... ... ,,	0	5	0	0	10	0			
1 lb. Cotton thread... ... ... ,,	0	8	0	0	8	0			
1 Padlock... ... ... ,,	0	10	0	0	10	0			
2 lbs. Boiled Linseed Oil.. ... ... ,,	0	3	10	0	7	8			
Workshop general superintendence and sundries at 10 per cent. on Rupees 36-6-1...	0	0	0	3	10	2	40	0	3
Wages of extra crew employed on Steamer "Prince."									
1 Tindal for 10 days ... ... month	10	0	0	3	5	4			
2 Steers men for 10 days per month each...	8	0	0	5	5	4			
5 Fire men for 15 do. do. do.	7	0	0	17	8	0			
3 Do. for 10 do. do. do.	7	0	0	7	0	0			
2 Lascars for 10 do. do. do.	6	0	0	4	0	0			
1 Do. for 15 do. per month...	6	0	0	3	0	0			
1 Do. for 8 do. do.	6	0	0	1	9	7			
				41	12	3			
Wages of extra Crew employed on Steamer "Pioneer."									
1 Engine driver. ... . each	12	0	0	12	0	0			
3 Lascars... ... ... ,,	6	0	0	18	0	0			
1 Steer man ... . ,,	8	0	0	8	0	0			
3 Fire men for 13 days per month ... ... ,,	7	0	0	9	1	6			
3 Lascars for 13 days do. ... ... ,,	6	0	0	7	12	9			
1 Do. for 12 do. do. ... ... ,,	6	0	0	2	6	4			
1 Do. for 1 day... ... ... ,,	0	0	0	0	3	0			
				57	7	7			
Wages of extra Crew employed on Steamer "Hope."									
4 Stokers for 10 days per month each	7	0	0	9	5	4			
3 Lascars for 10 do. do. do.	6	0	0	6	0	0			
1 Do for 9½ do. do. do.	6	0	0	1	14	4			
				17	3	8			
Wages of extra Crew employed on Steamer "Little Nell."									
1 Syrang for 16 days per month each	15	0	0	8	0	0			

Bill for repairing and fitting, &c. (Continued.)

Items.		Rate. RS.	A.	P.	Amount. RS.	A.	P.	Total. RS.	A.	P.
4 Teak logs	... each	1	8	0	6	0	0			
4 Hip Rafters	... ,,	1	0	0	4	0	0			
10 Rafter pieces	... ,,	0	4	0	2	8	0			
46½ Yards Brown Holland for Punka frills	... ,,	0	8	0	23	4	0			
4 Pieces colored cloth for Pandal ceiling; &c.	... ,,	4	10	6	18	10	0			
23 Yards Red curtain silk for half door	... ,,	2	8	0	57	8	0			
26 Pieces of white cloth for ceiling of rooms	... ,,	1	15	4	50	14	8			
1,102⅓ Cubits dyed cloth for carpeting of rooms	... ,,	0	1	9	120	9	0			
65¾ Yards Bombay cloth for Punka curtains	... ,,	0	6	9	27	11	9			
23 Yards Curtain muslin	... ,,	0	4	0	5	12	0			
70½ Yards Long cloth	... ,,	0	3	6	15	6	9			
72 Glass pans	Dozen	2	13	0	16	14	0			
62 Pots Shell Chunam	... each	0	9	0	34	14	0			
36 Yards Tape	... ,,	0	1	0	2	4	0			
18 Yards Red tape	... ,,	0	4	0	4	8	0			
2 Bundles broad tape	... ,,	1	0	0	2	0	0			
98 Sqr. Yds. Bamboo mat ..	12 Sqr. Yds.	1	0	0	8	2	8			
6 lbs. Varnish	... each	0	7	6	2	13	0			
14 lbs. Iron hooks	... ,,	0	1	3½	1	2	1			
50 lbs. Coir rope	... ,,	0	0	5	1	4	10			
41 Baskets	... ,,	0	0	9	1	14	9			
15¼ lbs. Cotton rope for Punkas ...	... ,,	0	5	3	5	0	1			
158½ Sqr. feet Sawyer's hire ...	100 Sqr. feet	1	5	4	2	1	10			
6⅜ Maunds nails	... each	3	0	0	19	2	0			
1,900 Copper nails	... 100	0	3	0	3	9	0			
800 Iron nails	... 100	0	3	0	1	8	0			
Rings for iron hooks ...	... ...	0	6	0	2	14	8			
8 lbs. Green paint	... each	0	4	0	2	0	0			
7 Bottles Wood oil	... ,,	0	6	6	2	13	6			
Workshop general superintendence and sundries	... ,,	0	0	0	4	13	6			
Sundry materials such as pots, brooms, paint, ball thread, brushes, &c., &c.,...		0	0	0	22	15	11	633	7	3
Sundries.										
Hire of two Transit Boats for three days engaged for conveying His Lordship's Baggage from Cocanada to Dowlaishwaram at 20 Rupees each per day ...		0	0	0	120	0	0			
Hire of Boat for bringing globes, &c. from Yanam ...		0	0	0	10	0	0			
Batta to Peons and Boat Lascars		0	0	0	11	11	0			
6 Coolies for taking Paddle Boats to Cocanada at 1¼ Rupees	... each	0	0	0	7	8	0			
Taking firewood and coal to different Locks, &c., for the use of Steamers.										
6 Coolies	... each	0	2	0	0	12	0			
19 Do.	... ,,	0	1	9	2	1	3			
8 Do.	... ,,	0	1	0	0	8	0			
Hire for 1 Dhoney	... ,,	0	0	0	2	15	6			
4 Boat Lascars for 15½ days ..	... each per month	6	0	0	12	6	4			
17 Do. for 15½ days... ...	do.	4	0	0	35	2	1			
2 Do. for 16 days... ...	do.	2	0	0	2	2	0			
Wages of Boat Lascars employed on different Boats for taking furnitures, &c.										
3 Lascars for 7 days	each per month	6	0	0	4	3	2			
17 Do. for 7 days	do.	4	0	0	15	13	10			
1 Do. for 3 days	do.	2	0	0	0	3	2	125	6	4
							Total...	956	7	2

Godavery District Engineer's Office, Dowlaishwaram, 12th February 1862.

(Signed) J. F. STODDARD, Major,
Acting District Engineer, Godavery District.

1 Letter No. 1,236, dated 12th February 1862.
2 Bills.
1 Bill for Rupees 1,439-9-0
1 Do. for „ 956-7-2
Total... „ 2,396-0-2

Submitted to Government with the recommendation that the Bills received with the foregoing letter, amounting in the aggregate to Rupees 2,396-0-2 may be sanctioned as a contingent charge.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In charge of the Audit and Account Departments.

No. 95. ORDER THEREON, 3rd May 1862, No. 936.

The Government sanction the Bills submitted with the foregoing Endorsement amounting together to Rupees 2,396-0-2, the same to be charged against the sum allowed for contingencies in the Public Works Budget of the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 96. Read the following Endorsement of the Consulting Engineer, Madras Irrigation and Canal Company, dated Chepauk, 8th April 1862, No. 107.

Read the following letter from F. AGNEW, Esq., Agent Madras Irrigation and Canal Company, to Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer Madras Irrigation and Canal Company, dated Madras, 8th April 1862, No. 114:—

SIR,

With reference to your letter No. 210, dated 24th February, I have the honor to annex a copy of the Chief Engineer's letter No. 253, dated 31st March, forwarding a Statement of the contract rates for work in the first Section of Canal.

From Colonel H. C. COTTON, Chief Engineer, to F. AGNEW, Esq., Agent Madras Irrigation and Canal Company, dated Kurnool, 31st March 1862, No. 253.

DEAR SIR,

1. As requested by Colonel Rundall in his letter* to you of 24th ultimo, I beg to enclose a Statement of rates for work in the first Section of the Canal as undertaken by Contractors, compared with the estimated rates.

* No. 210.

2. All the masonry works contracted for have been at the estimated rates with the exception of the bridges on the Bellary road in which the masonry estimated at Rupees 3 is undertaken at Rupees $2\frac{1}{2}$ per cubic yard.

No. of the Mile.		Estimated rate per cubic yard. Rs.	A.	P.	Rates paid per cubic yard. Rs.	A.	P.
4th	Rocky excavation	0	3	0	0	3	0
	Embanking...	0	2	0	0	2	0
5th	Rocky excavation	0	3	0	0	3	0
	Embanking...	0	2	0	0	2	0
6th	Rocky excavation	0	3	0	0	3	0
	Embanking...	0	2	6	0	2	6
7th	Do.	0	2	0	0	2	4
	Rocky excavation	0	3	0	0	3	0
8th	Embanking...	0	2	8	0	2	4
	Rocky excavation	0	3	0	0	3	0
9th	Embanking...	0	1	6	0	1	11
	Rocky excavation	0	3	0	0	3	0
10th	Embanking...	0	2	6	0	2	3
11th	Do.	0	2	0	0	2	0
	Rocky excavation	0	2	6	0	2	6
12th	Embanking...	0	2	6	0	2	6
	Excavation...	0	1	6	0	1	6
13th	Embanking...	0	2	8	0	2	8
14th	Do.	0	2	6	0	2	6
	Rocky excavation	0	3	6	0	3	6
15th	Embanking...	0	2	0	0	2	0
	Rocky excavation	0	4	0	0	2	8
	Do. do.	0	2	8			
16th	Embanking...	0	2	6	0	2 3	6 0
	Rocky excavation	0	3	0	0	3	0
17th	Do. do.	0	4	0	0	3	$10\frac{1}{2}$
18th	Embanking...	0	2	8	0	2	8

(True Copy.)

(Signed) F. AGNEW, *Agent.*

Submitted for the information of Government, with reference to their Proceedings of 18th February 1862, No. 243. It will be observed that out of twenty-seven rates twenty are the same, four are within and three in excess of those entered in the estimate.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
Consulting Engr. Irrigation and Canal Company.

No. 97. ORDER THEREON, 3rd May 1862, No. 937.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 98. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 24th April 1862, No. 278/U 11.

Read the following letter from Captain F. T. HAIG, District Engineer Upper Godavery, to the Deputy Chief Engineer, Northern Circle, dated Dúmagudiam, 10th April 1862, No. 261:—

SIR,

1. With reference to Order of Government of 24th February No. 292, I have the honor to request you will be good enough to submit, for the information of Government, the following explanation of the circumstances attending Mr. Shepherd's offer of his services for employment in this District.

2. Mr. Shepherd wrote to me some time in November last, stating that he held the appointment of an Overseer in the Department Public Works Nagpore, and requesting a situation on the Godavery works, for which he stated that his previous experience peculiarly qualified him. Being at the time very much in want of European superintendence at the 3rd Barrier, the offer was a welcome one. I immediately wrote to Mr. Shepherd that I would employ him, provided that Major Campbell, the Officer under whom he was then serving, gave his consent, desiring him at the same time to communicate with Major Campbell, and not to leave his post without his permission.

3. By the same post I wrote to Major Campbell, telling him of Mr. Shepherd's offer, of my own wants of qualified men, and of my willingness to engage Mr. Shepherd, if Major Campbell could dispense with his services without inconvenience, in which case I requested he would be good enough to grant Mr. Shepherd the required permission. I have no copies of either of these letters, but my recollection is clear as to their contents.

4. I heard nothing more on the subject until my return here from Madras, when I received the following letter from Major Campbell :—

"I have referred your application for Mr. Shepherd's "services and Mr. Shepherd's letter* to you, to Colonel Maxwell "by this day's post, for his orders thereon. If the Chief Engineer "consents I will throw no obstacle in the way. I have a very high opinion of Mr. Shepherd's "character and energy."

* This was Mr. Shepherd's letter to me which he had enclosed to Major Campbell.

I also learnt from Lieutenant Roberts that a Mr. Shepherd was working under his orders at the 3rd Barrier. I therefore concluded that the transfer had been arranged with the permission and consent of the Nagpore authorities.

5. Subsequently I received the Order of Government under notice, from which I gather that the Supreme Government are dissatisfied with my conduct in the matter, and are under the impression that I have been encouraging a man to leave his employment in the Nagpore Public Works in the hope of obtaining higher pay from me, without communication with, or the consent of, his superiors. How such a construction could have been put upon my acts in this case I cannot conceive. It appears to me that I followed precisely the course which the Secretary to the Government of India now lays down for my guidance, and that no other could have been devised that would have more effectually obviated the possibility of misconception or inconvenience to the parties concerned.

6. I have written to Lieutenant Roberts respecting Mr. Shepherd, and shall of course require a full explanation of the circumstances under which he was engaged. It is just possible that he may not be the same individual as the author of the letter which has led to all this correspondence.

1 Original letter No. 261, dated 10th April 1862.

THE accompanying letter, No. 261 of 10th April 1862, is submitted to Government, in explanation of the course taken by Captain Haig in the matter of the entertainment of Mr. Shepherd, a Subordinate in the Department Public Works, Nagpore, to which cause the Government of India took exception, as communicated in Order of Government, No. 292 of 24th February 1862.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 99. ORDER THEREON, 3rd May 1862, No. 938.

1. Before addressing the Government of India on the subject of the foregoing letter the Government would wish to be informed of the result of the reference stated to have been made by Captain Haig to Lieutenant Roberts.

2. The statement called for in paragraph 2 of Proceedings of Government, No. 292, dated 24th February 1862, for the quarter ending 31st January 1862, should be furnished without delay.

(Sgned) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 100. Read the following Proceedings of the Madras Government in the Revenue Department, dated 24th April 1862, No. 883:—

Sanctioning an estimate for certain improvements to the Salt Kottars Madras, and requesting to issue orders for certain alteration and revision in the same. (*Vide* Revenue Proceedings, 24th April 1862, Nos. 327-328.)

No. 101. ORDER THEREON, 3rd May 1862, No. 939.

Communicated to the Acting Deputy Chief Engineer, Central Circle, who will be good enough to revise the plans and estimates in accordance with the orders in the Revenue Department, and re-submit them to Government, stating at the same time the source from which the funds for the execution of the work are to be obtained.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 102. Read the following Proceedings of the Madras Government, in the Revenue Department, dated 25th April 1862, No. 894:—

Referring paragraph 10 of Captain Brine's report regarding the state of roads leading from the Annamalai Forests. (*Vide* Revenue Proceedings, 25th April 1862, Nos. 348-349.)

No. 103. ORDER THEREON, 3rd May 1862, No. 940.

Communicated to the Deputy Chief Engineer, Southern Circle, whose attention is called to the remarks in paragraph 10 respecting the state of the roads leading from the Annamalai Forests and to the steps necessary for their improvement.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 104. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 25th April 1862, No. 12,947 :—

SIR,

I have the honor to submit a letter of the 15th instant, from the District Engineer of the Presidency on the subject of the constant reference made to him for the repair of Punkahs in the numerous Military and Civil buildings at Madras. The circumstances under which the construction and the repair of the Punkahs generally was entrusted to the Department Public Works will be found detailed in Order of Government No. 860 of the 12th April 1859. I do not wish to raise any objection to the system therein ordered as regards the Provinces. At up country stations it will no doubt be always desirable that professional aid should be given in designing, constructing, and hanging Punkahs, but it does appear to me most objectionable that the time of Engineer Officers in responsible situations at the Presidency, with important works to engage them, should be even in a small degree occupied with such trifles ; and when it is remembered that ordinary wear and tear of the numerous Punkahs at the Presidency must be a source of perpetual references to the District Engineer, I think it will be admitted that the Department Public Works should be entirely relieved of such duty at the Presidency. There is a Barrack Master to superintend the work, and there are numbers of Cabinet makers and Carpenters competent to do it ; and I strongly recommend, that like all other fixtures in public buildings at the Presidency, the charge of the Punkahs may be made over to the Barrack Master. I think the reference instanced in the last paragraph of the District Engineer's letter is a sufficient argument of itself for the proposed change.

1 Letter from the District Engineer Presidency, No. 2,966, dated 15th April 1862.

From Lieutenant-Colonel H. W. HITCHINS, District Engineer, Presidency, to the Deputy Chief Engineer, Central Circle, dated Madras, 15th April 1862, No. 2,966.

SIR,

1. I have the honor to bring to your notice that the time of my Department is given up to a greater extent than I consider advisable to the repair of Punkahs in the numerous public buildings at the Presidency, and I would beg to suggest that as there are hundreds of Shopkeepers at Madras that would be happy to contract for such work, the Barrack Master should make his own arrangements, not only for repairing, but making up new Punkahs.

2. I can understand that in the Provinces where it would be difficult to find competent contractors to perform such work, that the Department Public Works should be called upon to give their assistance ; but it really appears unnecessary that any such assistance should be rendered by my Department at the Presidency where there are so many Cabinet makers, whose work people are more accustomed to that description of work than my Subordinates could possibly be.

3. The buildings supplied with Punkahs are about a hundred or I might say a thousand to one compared with any station in the Provinces, and it consequently occupies the time and attention of my Subordinates to a greater extent than could be imagined by any one not personally cognizant of the matter.

4. The accounts are also complicated by executing such work ; for all disbursements have to be kept under the head of advances and only recovered after some time when Bills have been submitted to the Barrack Master, who obtains the order for payment direct from Government.

5. I may mention the other day that the Brigade Major actually sent a Punkah Puller's Billet to my Office to be painted and numbered, and I think you will agree with me that such trifling work should not occupy the time and attention of an Engineer's Department, where there are much more important matters always commanding my attention.

No. 105. ORDER THEREON, 3rd May 1862, No. 941.

Referred to the Barrack Master for report.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 106. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 2nd April 1862, No. 236/V 87:—

1 Letter from Collector Vizagapatam, No. 194, dated 19th March 1862.
1 Do. District Engineer, No. 1,482, dated 15th March 1862.
3 Returns.
2 Estimates.

SIR,

1. The District Engineer and the Collector of Vizagapatam urgently solicit an increased grant as maintenance allowance for the two lines of road colored lake in the marginal diagram. Both are of the greatest importance to the District as representing the only lines of transit by which produce is brought from the interior to the Shipping Ports of Bimlipatam and Vizagapatam, the trade of which town has increased to the extent, in exports alone, of Rupees 4,07,653 for Vizagapatam, Rupees 16,07,465 for Bimlipatam, amounting to Rupees 20,15,118 during the past year.

2. Traffic Returns are appended fully exemplifying the value of the roads in question, and as it is clear that under such wear and tear the present mileage must prove altogether inadequate to maintain them in a practicable state, I trust Government will be pleased to sanction the following grants, viz:—

	RS.
For maintenance of road from Vizagapatam to Ankapilly, 20 miles, at Rupees 200 per mile....	4,000
Do. of road from Vizagapatam to Vizianagram, viâ Vamulavulsah and Chittavalsah, 32 miles, at Rupees 200 per mile............	6,400
Total per annum...	10,400

3. These grants to be in lieu of mileage now sanctioned, as follows:—

	RS.
Vizagapatam to Ankapilly, 20 miles, at Rupees 50	1,000
Do. to Vizianagram, 32 miles, at Rupees 100	3,200
Total	4,200
Total annual increase required	6,200
Total	10,400

No. 107. ORDER THEREON, 3rd May 1862, No. 942.

1. In the foregoing letter the District Engineer, Vizagapatam, brings to notice the insufficiency of the maintenance allowance sanctioned for certain lines of road in his District. The following statement exhibits in one view the amount of the existing maintenance grant for each line, the sum proposed, and the increase of expenditure which will thereby be entailed:—

	Existing grant.	Proposed grant.	Increase.
	RS.	RS.	RS.
Road from Vizagapatam to Ankapilly	1,000	4,000	3,000
Road from Vizagapatam to Vizianagram viâ Vamulavulsah and Chittavalsah	3,200	6,400	3,200

2. Prior to the Orders of Government, No. 2,485, dated 3rd December 1860, the road from Chittavalsah to Vizianagram (part of the line from Vizagapatam to Vizianagram) was repaired at the expense of the Rájá, but Government on the recommendation of the Collector consented to relieve him of the charge, and sanctioned a sum of Rupees 1,200, being at the rate of Rupees 100 per mile.

3. Although the Government thus relieved the Rájá of the cost of the maintenance of the line above mentioned, they nevertheless consider that he should contribute towards the maintenance of the local and cross roads passing through his Zamíndári, and before passing orders on the subject of the increased maintenance grants applied for by the Acting Deputy Chief Engineer, Northern Circle, they would wish the District Engineer, Vizagapatam, to place himself in communication with the Government Agent with a view to ascertain whether the Rájá is prepared to assist in the efficient maintenance of the road from Chittavalsah to Vizianagram by contributing the extra sum of Rupees 1,200 now stated to be necessary.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Read the following papers:—

NO. 108. From Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 16th April 1862, No. 267 ,U G1

SIR,

1 Letter from the District Engineer Upper Godavery, No. 254, dated 8th April 1862, with one table of distances.

1. With reference to Proceedings of Government No. 615, dated 31st March 1862, and in continuation of my letter No. 1..., dated 28th February 1862, therein disposed of, I have the honor to forward a further report of progress on the Upper Godavery by Captain Haig, dated 8th April 1862, and in doing so I shall not take up the time of Government with more than a very few remarks.

No. 1,006, 20th February 1862.

* Paragraphs 15, 16 and 17.

2. I wish to represent that looking to the present aspect of affairs as set forth by Captain Haig, and as contrasted with that exhibited in his last communication, I do not think I can in fairness be blamed for having in the conceived discharge of my duty, demurred to the adoption of the extravagant and, as I considered them, premature measures which Captain Haig recommended in February; and which it will be observed* he now, in April, himself holds to be objectionable.

3. Reviewing the statements at present made by Captain Haig, and balancing some discrepancies which seem apparent, I deduce :—

(1.) That there is no prospect whatever of the tram-way round the 35 miles Barrier (No. 1) being constructed this year; and but a very faint prospect of the same end being attained at either of the other Barriers (Nos. 1 and 2).

(2.) That pack-bullock roads will probably be completed round the last two obstacles in time for the next trading season: and that the earthwork of the third Barrier road may by possibility (though I fear with little probability) be also completed. But it is impossible for any one accustomed to this country to believe that a work freshly executed like this will, after a few days of such tropical rain as makes the Godavery rise 20 feet in a single night, deserve the name of a practicable "road."

Paragraph 13.

(3.) That only two boats will be available on the upper river this season for the expected traffic in Cotton and other bulky articles. The tonnage of these boats is not given; but from the circumstances it may be concluded they are small.

Paragraph 12.

(4.) That as an imperative necessity to traffic Government must insure all goods sent up and down the river against destruction or loss; and that the high rates of 1½ Annas (2¼*d.*) per ton per mile for up, and 1 Anna (1½*d.*) for down traffic must be demanded.

* Dated 28th February 1862, Para. 8.

Paragraph 9.

4. In all this I cannot but see additional grounds for the opinion which I ventured to express in my letter* No. 182 in the words of Government employed in their Order No. 1,148 of 1861, that "it is clearly "injudicious to attempt to force traffic by the river route before "it is really practicable;" and I adhere to the sentiment I expressed in the same letter, that the establishment of the barren fact that goods can be carried by the river is not commensurate with the risk of prejudice to the scheme by failure, such as appears imminent if affairs on the river maintain their present precarious aspect; and by the imposition, even temporarily, of rates of freight such as absolutely exceed those at which the Bombay Railway, when completed from Bhosawul to Oomrowtee, will be able to work with profit.

No. 615, dated 31st March 1862.

5. In conclusion, I would beg leave to take advantage of this opportunity to offer a remark upon the concluding paragraph of the Order of Government now under reference.

6. I received with respect, but with pain, the rebuke which was therein implied. But I cannot at the same time for a moment suppose it to be the wish of Government that, under any circumstances of expressed bias or pleasure, a servant of the State charged with an important public trust, should maintain silence when, in the strict execution of his duty, he is led by facts to the conviction that a course disadvantageous to the public interests is being embarked upon.

7. Not many years since a like sense of duty impelled me earnestly to remonstrate and protest against the carrying out of a scheme for the improvement of a certain harbour* in this Presidency, which had originated with men of high professional standing (Colonels Lawford and Sir Arthur Cotton). The Government of Madras decided against my views; but they were supported by the Government of India who called for inquiry. Committee after Committee of professional Officers was sent to the spot to examine and report; and by all in succession were my arguments held as futile; while my opposition was decried (as I fear it is now) as factious and "disloyal." Finally, the project was sanctioned; a large expenditure ensued; and the result was, as I learnt from the lips of the highest authority, the late Governor Lord Harris, a total failure; and even a prejudice to the former existant advantages of the port.

* Cuddalore.

8. I allude to this, I trust, in no spirit of self laudation; but only as an illustration of the evils which may result to a Government from what is considered "loyalty" to popular pre-eminence amongst their professional servants and advisers; and also inasmuch as it may be help to support a view which I have elsewhere expressed, that long persistence in a belief that success is attainable by particular means oftentimes blinds even eminent men to a perception of fallacies which may bar that attainment, or which may threaten to make success itself no gain.

From Captain F. T. HAIG, District Engineer, Upper Godavery, to the Deputy Chief Engineer, Northern Circle, dated Dúmagudiam, 8th April 1862, No. 254:—

SIR,

1. The progress made with the various works under execution in this District during the past month has been as follows:—

2. *Tram-roads.*

	Miles of line finished and in use.	Miles of earth-work completed and sleepers laid down.	Miles of earth-work only completed.
First Barrier	¾	3	8
Second Do.	1¼	7	10½
Third Do.	0	½	6

3. About 4,000 people exclusive of carpenters and other skilled workmen have been employed during the month.

4. Fever has continued very prevalent at the second Barrier. The Sub-Engineer in charge of that tram-way is now here sick, the second time that he has been compelled by severe illness to leave his Range in the last few months.

5. An unfortunate stoppage of the supply of funds, which took place just at the end of March, owing chiefly to my absence from the District, caused us the loss of many men at the two upper Barriers, and much embarrassment and discontent everywhere. This is but one way out of several in which, I am sorry to say, my prolonged absence has operated to retard progress.

6. In the latter end of March the Minister of His Highness the Nizam prohibited the further export of coolies and carpenters from Hyderabad to the Godavery works. This most unfortunate and ill-timed interference caused us the loss of 1,000 coolies, and 100 carpenters and smiths, whom my agents there held in readiness to start for this place. This has been a most serious check to the progress of the works. I was at Hyderabad just after it occurred, but the Resident, to whose countenance and support I am greatly indebted, thought that nothing could then be done to prevent it.

7. The reason given by the Minister for this interposition, was that so many people were leaving the city for the Godavery, that difficulty was experienced in finding labor for the works in progress in Hyderabad. I failed to discover what these works were, and was at a loss to understand how the temporary abstraction of 1,000 or 2,000 people from a city with a population of 300,000 could produce the effects stated. The people however drafted to this District came, not from the City of Hyderabad, but from the Cantonment of Secunderabad, as I have abundant proof; there is therefore the less reason to suppose that their absence could have very materially affected the supply of labor in Hyderabad itself. In any case I should have thought that the Hyderabad Government might have suffered a little temporary inconvenience, rather than resort to such an ungraceful act of interference with works in whose progress they are so deeply interested, by which their territories have already benefited, and which must eventually confer a largely increased value upon the Districts bordering on the Godavery.

8. Eighteen months ago these Districts had literally no market for their produce, the people were without employment, save in agriculture, with such returns as that yielded, and money had little or no value. Since then we have purchased in that country grain and other supplies for these works to the extent of not less than 25,000 Rupees, at prices which rarely if ever before obtained there, and considerable numbers of people have had employment on wages at least three-fold what they ever earned in their own villages. Bearing these things in mind and also the fact that His Highness the Nizam contributes not one Rupee towards the improvement of a river which borders his country for a length of 300 miles, I think we have reason to expec that he should at least abstain from such an arbitrary exercise of his authority as that under notice, and which, occurring as it did at a most critical moment, has had a disastrous effect upon the progress of the works. It has rendered most uncertain and difficult the completion of the second Barrier tram-way which the Sub-Engineer in charge informs me he would certainly have accomplished, had he received the party of carpenters which he was expecting from Hyderabad, and which was in readiness to start when their departure was prohibited.

9. In consequence of the above, and of all the other hindrances and difficulties which have been met with in the prosecution of the river works during the present season, I think it doubtful whether any one of the three tram-ways can be opened for traffic by next June. I shall however make every effort to complete those at the two lower Barriers, and as I intend to concentrate all our available men and means upon them, I have a good hope of success.

10. The Sub-Engineer in charge of the second Barrier informs me that with 30 or 40 more carpenters and an additional number of sawyers he could certainly finish his line by the desired time. I have therefore sent instructions to the Officers at the third Barrier to give up the attempt to complete that tram-way this year, to send a number of carpenters and sawyers down to Mr. McGregor, and to devote their attention exclusively to the formation of a good practicable cart road, on top of which we can next year lay the rails. With this addition to his working parties, I think Mr. McGregor, will, if his health holds out, succeed in making his line practicable by June.

11. At the first Barrier also I hope to make much better progress in the next two months. The line passes at one place over the Canal embankment for about two miles, and it is owing to the very heavy amount of earth-work in this piece that the earth-work of only eight miles is completed. That remaining to be done on the rest of the line is comparatively trifling in amount, and we can easily finish it in time. The delay is in the formation of the way, owing

to the scarcity of carpenters and sawyers, and the difficulty of collecting the quantity of timber required. I am, however, giving increased attention to this part of the works, and have great hopes of finishing the whole line by 15th or 30th June.

12. You will thus observe that though I cannot speak decidedly as to the probability of having the three roads ready by the next freshes, and though considerable uncertainty on this point must remain up to the last, there is at least a prospect of our so far finishing them as to enable us to commence traffic, though in an imperfect manner, by the middle or end of June. If any of the wood work should then remain to be done, it might I think be finished by the end of July, even allowing for interruptions by rain; and the connection between the termini and the completed portion of the lines could be made for that time by means of carts.

13. There will be a sufficiency of boats in the reaches between Dowlaishwaram and this Barrier and between this and the second, but the accounts I receive from the third Barrier lead me to believe that not more than two boats will be ready in each of the reaches above and below that point by the commencement of the navigation season. This has been chiefly owing to the difficulty of procuring timber, almost the whole of the teak in that part of the country being monopolized by a Soucar at Hyderabad. This man sent orders to his agent to supply me with all I required, but during my absence at Madras the latter supplied none whatever, and paid no attention to the remonstrances of my Officers, so that until my return little work was done. Nearly two months have been lost in this way.

14. As it is now necessary that immediate orders should be passed regarding the traffic arrangements for next navigation season, I think the Government may with tolerable certainty assume that the whole river and land communication will be in such a state of forwardness by 15th June next, that traffic, to a limited amount, from Hingen Ghát to the Coast, and *vice versâ*, will be practicable. To what amount, I feel quite unable to say, owing to the uncertainty as to the capabilities of the Steamer "Mayflower" in the uppermost reach, but I should think that with the limited number of boats that will be available unless we should find ourselves able to build at a much faster rate than I now reckon on, 1,000 tons down and 1,000 up will probably be the limit, between the foot of the third Barrier, and the sea, and possibly less than that between the same Barrier and Hinghen Ghát; or rather I should say that as a deep pool extends for 20 miles above the third Barrier, 1,000 tons may be carried down from, and another 1,000 up to that point, or a small quantity to or from Chandah or Hinghen Ghát.

15. For such a trifling amount of business the appointment of a Traffic Manager appears to me unnecessary, for though he could be usefully employed in investigating the capabilities of the country on the upper part of the river, and finding out which markets are most readily accessible, and what roads might with advantage be opened, yet this could not be done till after the rains, and such services would not afford an adequate return for the salary he would require.

16. Neither does it appear to me advisable to entertain any special traffic establishment. Proper crews must of course be put into the boats and steamers, firewood must be provided, and ponies or cattle for working the tram-roads, as well as carts at the third Barrier, but all these arrangements I can undertake with a trifling addition to my present establishment, and can detach from it whatever parties or superintendence may be required during the navigation season for the traffic Department.

17. I would therefore request the sanction of Government for the following arrangements :—

(1.) That Major Stevens should act as Traffic Manager for the few months that his services in this capacity may be required, a moiety of his salary being debited to the Transit Department for that time. During the rains he would have but little to do here of his present work, and, by the time the next working season commences, the affairs of the Transit, if not by that time wound up for the year, can be handed over to some other person.

(2.) That Mr. H. Dennison, who now on a salary of 100 Rupees per month acts as Agent for this District in all matters connected with the landing and despatch of stores, tools, &c., the enlistment of the coolies, and procuring supplies, on the Coast, should, on an increased salary of 150 Rupees, be Traffic Agent at Cocanada, and that Mr. W. Farley now employed on a salary of 150 Rupees at the third Barrier should be Assistant Agent at the upper terminus or termini of the navigation.

(3.) That Mr. J. Barber, lately first Officer on Board H. M.'s S. S. "Baltic," should be appointed to the command of the "Prince" steamer which is intended to ply between Dowlaishwaram and this Barrier, on a salary of Rupees 200 per month.

(4.) That if suitable persons can be found for the command of two other of the steamers, now in charge of the Native Syrangs, power should be given me to engage them subject to the approval of Government.

(5.) That proper crews should be enlisted, and the flotilla put at once in working order, to the extent required for traffic of the amount above-mentioned, viz., for the carriage of about 1,000 tons up and 1,000 tons down-river.

(6.) That the Officers and Agents now charged with the construction of the tram-roads at the Barriers, should superintend the working of those lines during the navigation season, and that a portion of their present establishments, as much as the traffic may be found to require, should be for the time transferred to that particular duty, their salaries being debited to the Transit Department.

(7.) That as soon as the Transit operations have been brought to a close for the year, all Officers and establishments that have been temporarily employed upon them shall return to their present duties.

(8.) That a certain sum, sufficient for the payment of six months salaries, and to meet other current expenses connected with the Transit for that line, should be placed at the disposal of the Acting Traffic Manager who will be directed to furnish monthly Accounts Current, to collect the amounts of all bills due on account of goods carried by the river, and to furnish a regular bill at the close of the operations, showing the details of the expenditure during the season under proper heads, so as to exhibit the actual working expenses of the land and water lines, cost of establishments, superintendence, &c., &c.

(9.) That all receipts on account of goods carried should be credited to the year's allotment for the Upper Godavery, in repayment of the sum borrowed as above suggested.

(10.) That the rates for freight should be—

1½ Anna per ton per mile for all goods up-stream.

1 Anna for all down.

This classification, though much too general as a permanent arrangement, will suffice for the present season, and its simplicity will enable Merchants who may be disposed to avail themselves of the means of transport offered by the Godavery at once to ascertain, without delay or doubt, the amount they would be charged for any particular description of goods. The present advanced state of the season, when any produce that is to be exported by the Godavery this year must be purchased and brought down to the river bank before, or shortly after, the commencement of the rains, render this consideration a most important one. The only exception I would propose to the above rates would be in the article of Salt, which I would charge for at the rate of 9 Pice (¾ Anna) per ton per mile only.

Cotton, if unscrewed or brought for shipment in the bales in which it is usually packed in the interior for exportation, should be charged at 1½ anna per ton per mile.

(11.) That with regard to the proportion of bulk to tonnage, viz., the number of cubic feet, or number of bags, of particular commodities, which shall be reckoned to the ton, the classification adopted by the Madras Chamber of Commerce, or by the leading Firms should be adopted. I have not a statement of these rates by me, but it can doubtless be easily procured.

(12.) That Government should insure shippers against actual loss or destruction of their goods in transitu but not against damage or delay.

(13.) That passengers shall be divided into two classes, first and second, the former to be entitled to a share of a cabin, whatever may be available, the latter only to a deck passage, and that the rates shall be, for

1st class one Anna per head per mile.
2nd Class ½ Anna.
Natives ¼ Anna.

Two cwt. of baggage to be allowed to each class. All extra weight to be charged at common goods rates.

The above rates to include every charge by land and water, except food and attendance, which passengers must provide for themselves.

(14.) That no goods shall be shipped

at Hinghen Ghát or Chandah	after 1st October.
at Salagaum or Mogellee	after 1st November.
at Sironcha or Deodoolah	after 1st do.
at Dúmagudiam or Buddrachellam	after 1st January.

In all the above cases the destination of the goods would be either Cocanada or some point lower down-river than that of shipment. The following regulation would apply to goods sent up river.

(15.) That no goods shall be shipped at Coconada or Dowlaishwaram :—

for Hinghen Ghát or Chandah	after 1st September.
Salagaum or Mogellee	after 10th do.
Deodoolah or Sironcha	after 1st October.
Dúmagudiam or Buddrachellam	after 15th December.

This limitation of the time during which the Transit agency shall engage to carry goods is necessary for this season, owing to our imperfect acquaintance with the state of the upper rivers, the possibility of delays in the transhipments at the Barriers, and the inadequate steam power at command.

18. The above arrangements are, I think, all that it will be necessary for the Government to sanction for the present year's traffic. If they are approved I would suggest that they should be forthwith communicated to the Mercantile communities at Madras and Cocanada, to the Heads of the Commissariat and Ordnance Departments, the Resident at Hyderabad, and the Commissioner of Nagpore. Not a day should be lost in promulgating this information, for, as I have already remarked, intending exporters ought to make immediate arrangements for the purchase and delivery of their goods at the different points along the river. The month of May is the one in which the greater part of the Cotton exported from Hinghen ghát and that part of the country, is collected and despatched to the Coast. I have already received information that parties in the Nagpore and Chandah Districts are inquiring as to the rates to be charged for carriage, &c., and I would on this account request that if my propositions above detailed meet with the approbation of Government, the fact may be communicated to me by Telegraph, with a view to my placing the parties in question, in the earliest possible possession of the required information.

19. I would also request that I may be informed at an early date whether any troops are likely to be moved between Nagpore and the Coast this year, in order that I may consider what arrangements might be made for their transport by the river, and place myself in communication with the Military authorities on the subject.

20. I enclose a table of distances, and charges per ton for carriage at the three rates proposed above, viz., $1\frac{1}{2}$ and 1 Anna, and 9 Pice.

Table of distances on the Godavery with the charges per ton for carriage at the rates proposed in Captain Haig's letter of 8th April 1862, No. 254.

Names of places.	Distance in miles.	Amount per ton at following rates per ton per mile.			Remarks.
		$1\frac{1}{2}$ Anna.	1 Anna.	0 A. 9 P.	
		RS.	RS.	RS.	
Cocanada	......	......	......	......	
Dowlaishwaram	32	3	2	$1\frac{1}{2}$	Commencement of river navigation.
Koyidtha	92	$8\frac{3}{4}$	$5\frac{3}{4}$	$4\frac{1}{4}$	
Rudramcota	104	$9\frac{3}{4}$	$6\frac{1}{2}$	5	
Baddrachellam	137	13	$8\frac{3}{4}$	$6\frac{1}{2}$	1st Barrier.
Dúmagudiam	152	$14\frac{1}{4}$	$9\frac{1}{2}$	$7\frac{1}{4}$	
Mungapetta	192	18	12	9	
Deodoolah	222	$20\frac{3}{4}$	14	$10\frac{1}{2}$	2nd Barrier.
Madapore	259	$24\frac{1}{2}$	$16\frac{1}{4}$	12	
Chinnoor	276	26	$17\frac{1}{4}$	13	
Sirooncha	274	$25\frac{3}{4}$	17	13	Head Quarters of Deputy Commissioner.
Salagam	352	33	22	$16\frac{1}{2}$	3rd Barrier.
Chandah	405	38	$25\frac{1}{2}$	19	
Hinghenghát	460	43	$28\frac{3}{4}$	$18\frac{3}{4}$	

Upper Godavery,
District Engineer's Office,
Dúmagudiam,
8th April 1862.

(Signed) F. T. HAIG, Captain,
District Engineer, Upper Godavery.

No. 109. ORDER THEREON, 3rd May 1862, No. 943.

1. In the above Report, after detailing the progress made on the Tram-ways up to the end of March, and the probable completion of those at the 1st and 2nd Barriers during the month of June next, the District Engineer Upper Godavery requests orders on certain suggestions connected with working the river during the coming season.

2. For want of a sufficient number of boats, he is apprehensive of being able to carry only a very limited quantity of goods, and he proposes the following scale of charges :—

	A.	P.	
For all goods carried up-stream with the exception of Salt, which is to be charged at half the rate...	1	6	per ton per mile.
For all goods carried down-stream, with the exception of *unscrewed* Cotton, which is to be charged $\frac{1}{2}$ Anna extra	1	0	do.

The proportion of bulk to tonnage to be regulated according to the classification adopted by the Chamber of Commerce.

For Passengers :—

Cabin,	1st Class,	1 Anna	per head	per mile.
Deck,	2nd do.	½ do.	do.	do.
Do.	Natives do.	¼ do.	do.	do.

2 cwt. of baggage allowed to each class; all extra to be charged at common goods rates.

The above to include all charges by land and water with the exception of food and attendance.

3. His Excellency the Governor in Council considers is desirable to adopt the District Engineer's suggestions as a whole, leaving with him the responsibility of working out his own scheme as an experiment for the present season. It is doubtful whether with a limited quantity of traffic, the above rates will cover the actual cost of conveyance, but they will serve to show whether by arrangements such as those proposed, any large amount of produce will be attracted to the river route, and will thus furnish data not otherwise procurable.

4. Reference will be made, through the Resident to the Nizam's Government, regarding the effects produced by the obstructions mentioned by Captain Haig, and that Government will be invited to remove the restrictions imposed on the emigration of labor from the Hyderabad Territory, as calculated to retard a work, the successful completion of which cannot fail to prove of much immediate benefit to His Highness' dominions.

5. The Deputy Chief Engineer will instruct Captain Haig to give all necessary publicity to his proposed arrangements for the traffic in the various local Gazettes, and also communicate to him the required information, relative to the classification of goods alluded to, above in paragraph 2.

6. The sanction of Government will be intimated by Telegram to Captain Haig, and the proposed Transit arrangements be communicated to the Commissioner of Nagpore and to the several Heads of Departments for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letters be despatched.

No. 110. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government Public Works Department, Fort Saint George, to the Secretary to Government of India, P. D. W., dated 3rd May 1862, No. 944.

SIR,

1. In continuation of my letter dated 10th April 1862, No. 728, I am directed by His Excellency the Governor in Council to lay before the Government of India a further report from Captain Haig, of progress made in constructing the Tramways at the three Barriers of the Upper Godavery, together with the Proceedings of this Government passing orders on the suggestions made by him for working the river during the coming season.

Dated 8th April 1862, No. 254.
Dated 3rd May 1862, No. 943.

2. Owing to the want of boats, only a limited traffic is expected at first, and the following is the proposed scale of charges :—

Goods.

	RS.	A.	P.		
All goods carried up-stream ...	0	1	6	per ton	per mile.
Salt do. ...	0	0	9	do.	do.
All goods carried down-stream ...	0	1	0	do.	do.
Unscrewed Cotton do. ...	0	1	6	do.	do.

Passengers.

Cabin, 1st Class	0	1	0	per head	per mile.
Deck, 2nd do.	0	0	6	do.	do.
Do. Natives	0	0	3	do.	do.

This Government have adopted this scale and the District Engineer's suggestions as a whole, but have left with him the responsibility of working out his own scheme as an experiment for the present season; and although it is doubted whether, with the limited traffic expected this season, the above rates will cover the cost of conveyance, they will serve to show if any large amount of produce may be attracted to the river, and thereby furnish data not otherwise procurable.

3. A communication has been addressed to the Resident at Hyderabad pointing out the injurious effects produced by the recent orders of the Nizam's Government regarding the emigration of labor to the Godavery Works, in the hope that he will be able to induce that Government not only to withdraw the order in question, but also to add its weight and influence in the prosecution of works, the early completion of which cannot fail to benefit His Highness the Nizam's dominions.

4. This Government have also ordered that all necessary publicity be given to Captain Haig's proposed transit arrangements.

No. 111. From Lieutenant-Colonel W. H. HORSLEY Secretary to Government Public Works Department, Fort Saint George, to Colonel CUTHBERT DAVIDSON, C. B., Resident at Hyderabad, dated 3rd May 1862, No. 945.

SIR,

1. I am desired by the Madras Government to forward the accompanying Extracts from a Report just received from Captain Haig, and to express their hope, that you will be able so to represent to His Highness the Nizam the injurious effects produced by the recent order of his Government regarding the emigration of labor to the Godavery works, as will induce him to withdraw it, and to add instead the weight of his Government in the prosecution of works already benefiting the portions of his territory adjacent to them, and whose successful early completion can hardly fail to be followed with almost immediate benefit to a large portion of his dominions.

2. I am directed further to add that Captain Haig anticipates, that the land and river communications will be in such a state of forwardness by the 15th June next, as to admit of traffic to a limited extent being practicable from Hinghen Ghât to the Coast and *vice versâ*.

3. Orders have been issued to that Officer to circulate particulars of his arrangements, as well as the rates of freight for passengers and goods, for the information of parties anxious to avail themselves of the river route.

No. 112. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, Fort Saint George, to the Chief Commissioner of Nagpore, dated 3rd May 1862, No. 946.

SIR,

1. I am directed by His Excellency the Governor in Council to inform you that Captain Haig reports his anticipations of having the land and river communications along the Godavery in such a state of forwardness by the 15th June next as to render traffic practicable to a limited extent between Hinghen Ghât and the Coast.

2. Orders have been issued to Captain Haig to circulate particulars of the arrangements, as well as the rates of freight for passengers and goods, for the information of parties anxious to avail themselves of the river route.

No. 113. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 31st March 1862, No. 8 :—

SIR,

1. I have received your Despatch, No. 2, of the 16th January last, in which you ask for a copy of the Contract made between Her Majesty's Government and the Madras Irrigation and Canal Company, if the same has been executed.

2. No such Contract has as yet been executed, the reasons for which will be apparent to you on reading the copy of a letter of 7th November last from the Directors, which I send herewith.

3. For the better understanding of that letter, I transmit also a copy (printed by the Directors) of the communications which have previously taken place between this Department and themselves. This printed correspondence was compiled by the Directors with a view to obtain an opinion on the legal position of the questions between the Company and Her Majesty's Government, and not drawn up in communication with this Department, and it appears to omit some material particulars. It may, however, be serviceable in explaining to you the course and nature of the proceedings which have taken place, although the "opinion" printed among them has been in no degree accepted by Her Majesty's Government.

4. From the letter which I now enclose, and from their former letter of the 17th May last, it would appear that the Directors have waived the prosecution of those portions of their original project which relate to localities above Soonkasala, on condition of their obtaining the consent of Her Majesty's Government to their being allowed to execute, the whole of the operations from Soonkasala to the Sea, with a guarantee to the extent of one million, and permission to finish the works within that area, although the total cost may exceed one million.

5. To this proposal I objected, on the grounds detailed in Major Orr's Report, and in the communication of your Government. It appeared to me that the entire work below Soonkasala must cost more than a million; that there were serious objections to the execution of part of those works with guaranteed, and part with unguaranteed capital; and that the Company would be placed in a position fully adequate to the real meaning of the existing engagement between them and Her Majesty's Government, if they were permitted to execute the work by sections, so that, when the limit of the guaranteed million had been reached, the mode of executing any still remaining sections might be matter for further consideration.

6. To this, however, the Directors have objected, resting on their supposed right to the possession of the whole area embraced by their original project, although it has turned out that this project cannot be executed, except at a cost far exceeding that originally anticipated. They have, consequently, declined to enter into a Government Contract so framed as to suit the views of Her Majesty's Government, and they have prosecuted, and, as I am informed, are prosecuting, this work in reliance on what they term in this letter "the Contract made with Lord Stanley, as set out in their letter of the 6th December 1858."

7. This being the decision of the Directors, arrived at with full knowledge that Her Majesty's Government do not assent to their claims, I have not thought that any occasion had as yet arisen for interfering with their proceedings; and, as my own views had been fully set forth in opposition to theirs in former correspondence, I have left this, their last letter, unanswered.

8. From such information as I have received, respecting the progress of their undertaking, it appears probable that the expenditure will not do more than reach the estimates made by Major Orr, in his Report forwarded to me with your Despatch of the 10th April last; possibly it may fall short of it. As to this, however, I speak necessarily on very imperfect information and conjecture. But I will assume that the whole work from Soonkasala to the Sea may be executed for the sum of 1,200,000*l.*, or not much beyond that amount.

9. In this case, as there is no doubt that the project bids fair to enhance considerably the value of the adjoining land, I think the Presidency of Madras might benefit by an arrangement being now made between the Company and Her Majesty's Government, making over to the Company the whole of that portion of their original project which lies below Soonkasala, the portion above being carefully excluded.

10. Before, however, I proceed to any further negotiation with the Company, I am anxious to receive the opinion of your Government whether such negotiation, on the basis here indicated, is advisable. I shall be glad to receive your answer with as little delay as possible.

11. Together with that answer, I wish to receive from you an account of the progress which the Company has made in its works up to the date of your writing, and any information which you may be able to furnish touching the expenditure on those works in comparison with Colonel Cotton and Major Orr's respective estimates. But I am desirous that you should not delay your answer on this account, as a rough statement only is needed.

MADRAS IRRIGATION AND CANAL COMPANY,
27, CANON STREET, E. C.
7th November 1861.

SIR,

1. I am desired by the Board of Directors to forward to you, for the information of the Secretary of State in Council, the following statement as a reply to your letter of the 13th August last.

2. The arrangement suggested on behalf of Sir C. Wood, in the letter addressed to me by the Earl de Grey and Ripon on the 12th April last, differed materially from the agreement previously made, and now subsisting between the Government and this Company, and sought to restrict the dimensions of the project entrusted to the latter. Nevertheless, being seriously desirous of carrying out the wishes of Sir C. Wood by accepting such proposal, if they could do so with due regard to the interests of their shareholders, the Directors gave to the matter their most careful consideration, and embodied the result of their deliberations in my letter to you of the 17th May last, wherein it was stated that, subject to the three conditions there particularized, they (the Directors) were willing to accept the desired modification of terms.

3. Two of the conditions thus put forth, viz., those relating to the Maury tank, and the partially constructed anicut and channel at Kurnool, were proposed, as conditional only, upon the opinion of the local Government that the construction by the Company of the works referred to would be necessary for the proper development of the proposed restricted project, and highly desirable on the ground of economy, good to the country and increased returns to the

Government and the Company. The third condition which stipulated that provision should be made in the intended Contract for the completion by the Company of the entire work from Soonkasala to the coast, in the event of the present guaranteed Capital of £1,000,000 being found insufficient for that purpose was however considered to be and was put forth as being positively indispensable to protect the shareholders from the possible risk of having their funds expended upon an incomplete and therefore unprofitable work.

4. As the Directors now understand that Sir C. Wood does not approve of the conditions thus proffered for his consideration, and as they cannot forego that last referred to, his proposed new arrangement cannot be carried out, and therefore the Contract made with Lord Stanley, as set out in my letter of the 6th December 1858, remains unaffected as containing the existing terms of arrangement between the Government and the Company, to be acted upon until the completion of a formal deed prepared in accordance therewith.

I am, &c.

(Signed) JOHN WESTWOOD,
Secretary.

The Under Secretary of State for India, India Office.

III.
[CORRESPONDENCE.]

THE MADRAS IRRIGATION AND CANAL COMPANY,
27, CANNON STREET, LONDON, E. C.
12th March, 1861.

SIR,

1. The Directors have desired me to address you, with reference to the contents of the letter of Mr. Baring, dated the 30th November last, as also upon the draft contract subsequently forwarded to them, and to assure the Secretary of State in Council that, from the commencement of the proceedings which have taken place, with reference to the settlement of a formal deed based upon the terms of contract contained in my letter to the Under Secretary of State, dated the 6th of December 1858, they have been actuated solely by a sincere and anxious desire to carry out those terms in a fair and equitable spirit, and for the benefit of all parties, especially adopting the views of Government, wherever they could do so consistently with the interests entrusted to their charge.

2. Feeling that a very serious responsibility attached to the settlement by them of so important a deed as the contract under discussion, and the more so as they were unable to decide with any certainty the existing legal status of the Government and the Company, it occurred to the Directors that to have that status clearly ascertained before proceeding further in the negotiation, would materially aid the Secretary of State in Council, as well as themselves, in arriving at a satisfactory solution of difficulties; and accordingly they placed before Mr. Rolt and Mr. J. H. Lloyd, two eminent Counsel, a full, and they believe thorough y impartial statement of facts, and having obtained the opinion of these gentlemen thereon, they now forward printed copies of both documents for his information, and respectfully solicit his serious and deliberate consideration of their contents.

3. The papers thus transmitted encompass so completely the whole subject under consideration, with its attendant circumstances, and explain so fully their own views and position, that the Directors believe it to be unnecessary to enter here into a lengthened statement which could only consist of repetition, and uselessly occupy time.

In adopting the present course, the Directors seek only to procure a deed founded upon an equitable, and at the same time, as regards its effect towards the Secretary of State in Council, a most liberal interpretation of that arrangement, and they are therefore prepared to make every reasonable concession to meet his wishes. Accordingly, acting in this spirit, the Directors have caused the draft contract referred to at the commencement of this letter, to be altered so as to satisfy as far as possible all the exigencies of the case, and at the same time render it acceptable to him, and looking to the fact that a deed so framed will allow to this Company no extension whatever of the present agreement, nor confer upon them any benefit not already secured, whilst it will yield to the Government certain powers and advantages not specifically, or even inferentially embraced by such agreement, and also relieve them from liability regarding the extended guarantee of interest, the Directors entertain a confident hope that the Secretary of State in Council will not object to its principles and provisions, especially as it appears to them that thereby all difficulties will be overcome, and the views and wishes of all parties satisfactorily met. Further, they are convinced that such a deed will certainly produce the following amongst other beneficial results :—

FIRSTLY.—It will most effectually confine the governmental guarantee of interest to the present capital of £1,000,000.

SECONDLY.—It will give to the Shareholders of the Company that upon the faith of which they subscribed their money, viz., power to carry on to completion an entire self-contained work or project not subject to depreciation by curtailment.

THIRDLY.—It will fulfil the wishes and strong recommendations of the local Government, and confer a boon upon the country by securing for the population of Bellary the means of cultivating its extensive, but at present arid and unproductive plains.

FOURTHLY.—It will place that district, so eminently fitted to the growth of cotton, in cheap and easy communication with the coast, an object at this time of the highest national importance, and which would be excluded and unattainable if this Company's operations were confined to a portion only of the Toombuddra project, and—

FIFTHLY.—It will enable the experiment to be made by this Company, and which, as stated by the then Secretary of State in Council is, "an experiment the result of which, by serving "either to encourage or to discourage the further application of British capital and enterprise "to similar undertakings in India, cannot but exercise a very serious influence on the interests "of both countries," to be fairly and properly tried, which will not be the case if an entire work is not carried out.

It is only necessary that I should add that the Directors return the draft as now altered in the regular course.

I have the honor to be, Sir,
Your most obedient Servant,
JOHN WESTWOOD,
Secretary.

The Under Secretary of State for India.

INDIA OFFICE.
12th April, 1861.

SIR,

I am directed by Secretary Sir C. Wood to acknowledge your letter of the 12th March last, in which you represent on the part of the Directors of the Madras Irrigation and Canal Company their dissatisfaction with the terms proposed in Mr. Baring's letter of the 30th of November last; and inclose a case, with the opinion of Mr. Rolt and Mr. Lloyd thereupon, explanatory of the legal position which the Directors consider themselves to occupy.

I am to state that Sir C. Wood is desirous, on the present occasion, to avoid discussion of the legal questions raised in your letter. Although he has no doubt that the Directors have stated the case with a full desire to arrive at an authoritative exposition of the law as it affected the position of the Shareholders, yet he thinks that, in order to obtain a complete opinion, the case should have embraced other subjects for consideration, besides those which appear on the face of it; and that, if these had been included, it would appear that Her Majesty's Government were warranted in law as well as in justice in making the proposals conveyed by Mr. Baring's letter.

But he is satisfied that the points at issue are best discussed with reference to what is expedient for all parties, and not to extreme legal rights. Since the commencement of the correspondence between the Company and this department, much information has been received by both regarding the proposed scheme, which could not have been anticipated at first; and the tendency of that information has been to show that far greater difficulties have to be surmounted, and far greater expense to be incurred, than were at first contemplated. On the other hand, the circumstances of the Indian Government render it more than ever imperative that Sir C. Wood should abide by the determination already announced before, that under no circumstances will the guarantee be extended beyond the sum of a million. I am now to enclose for the information of the Directors a report just received by him, addressed by Major Orr to the Madras Government, which places the probable amount and expense of the project in a still more unfavourable light than before.

Sir C. Wood cannot, on the part of Government, assent to any further concession, in order to give an appearance of extent to the scheme quite incommensurate with what can be really executed for the sums originally contemplated by the promoters for any sum which it is at all probable that they may raise. *It is not for him to judge of the views, or of the interests of the Shareholders*:—nevertheless he cannot but feel satisfied that, when they have considered the whole case, they will greatly prefer to be confined to a scheme which, though not free from great difficulties, is manageable, and can be executed at a comparatively reasonable cost, and which appears moreover, in itself separately remunerative, rather than to be admitted to the nominal possession of the extended scheme, that scheme being one entirely beyond their present or probable means, and involving an expenditure which must exceed the guaranteed sum by a very considerable amount.

Under these circumstances, Sir C. Wood has no choice but to confine his assent, in the same manner as in Mr. Baring's letter, to that portion of the original scheme which was described in the observations of the Secretary of the Company, dated November 1860, as the "Kurnool Project."

It will, however, be necessary from Major Orr's report, that the project should commence, at Soonkasala, a few miles from Kurnool, instead of at Kurnool itself.

In the next place, with regard to the Mauri Tank part of the original scheme, Sir C. Wood feels compelled to withhold his sanction from it, as before. The report of Major Orr furnishes strong additional reasons for maintaining this refusal. Those reasons appear of great weight, as regards the probabilities of failure attaching to the project itself; but the danger lest it should deprive Mysore of a portion of the water essential to its own prosperity, constitutes alone an insuperable difficulty, on such information as we now possess.

It will be, therefore, necessary that the Company should derive their winter supply of water from some other source or sources, and the report of Major Orr appears to point out methods by which this object may be attained with reasonable prospect of success. The works necessary for the purpose, estimated at £200,000, must of course be regarded as a portion of the work now to be executed, that is, of the Kurnool section above mentioned.

Major Orr estimates the entire expense of this Kurnool section, with the supply of water to it, at £1,100,000; but it is evident from his report, that this estimate is likely to be somewhat exceeded. The guarantee, on the other hand, will be for a million only; and from the case which the Directors have laid before Council, Sir C. Wood understands them to apprehend (not from the contents of Mr. Baring's letter of 30th November, but from the language of the draft contract tendered to them) that, when a million has been expended on the Kurnool project without completing it, they may be peremptorily forbidden to execute the remainder with unguaranteed capital. To this refusal they consider that they may be exposed, even although the expenditure on the uncompleted portion may have been enhanced by additional and costly requirements on the part of Government itself.

Sir C. Wood is disposed to agree that if the proposed alterations in the contract have this effect, the Directors might reasonably complain of an undue severity of restriction.

It appears to him that the objects of both parties may be reasonably attained by following out the suggestion of Major Orr. Let the work be executed in sections, as reliable plans and estimates are framed. Let these sections be so arranged that a certain number of them may be completed (as nearly as may be) by the expenditure of a million. Let us then assume that after such expenditure, a definite section or sections remain to be executed: it will then be for Government and the Company to determine on what terms (short of guarantee) the remainder can be best performed, *if authorized and performed at all*. And the draft contract should therefore be so worded, as *not to preclude* the Company from executing that supposed remainder with unguaranteed capital.

Should the Directors agree in these views, Sir C. Wood imagines that there will be no difficulty in instructing the legal advisers on both sides to settle the few points which remain for discussion on the draft contract, in accordance with such agreement.

I am, Sir,

Your obedient Servant,

DE GREY & RIPON.

JOHN WESTWOOD, ESQ.

THE MADRAS IRRIGATION AND CANAL COMPANY,
27, CANNON STREET, E. C.,
20th April 1861.

SIR,

The Board of Directors of this Company desire me to state with reference to your letter on the 12th instant (in reply to mine of the 12th ultimo), and especially its second paragraph, that they will esteem it a favour if Sir C. Wood will kindly point out for their information those subjects which he thinks were omitted from the case submitted by them to Counsel.

As by Mr. Baring's letter to me of the 30th November last, the Secretary of State in Council gave the following as his decision, viz.:—"The result therefore will be, that the terms of the Contract must be so framed as to correspond with the heads of the Agreement contained in your letter of the 6th December 1858," and as by the opinion of Mr. Rolt and Mr. Lloyd given subsequently, it appears, Firstly—That my letter thus referred to contains a fair and accurate statement of the relative position of the Government and the Company as resulting from the previous correspondence, and Secondly,—That the *resumé* contained in such letter has

been acquiesced in as an embodiment of the terms upon which a formal contract was to be based, the substance of such terms having been also conclusively affirmed so as to establish a binding contract; and as such Contract has been mutually acted upon and a very large expenditure incurred in accordance with its provisions, the Directors submit that the only matter now remaining to be disposed of between the Secretary of State in Council and the Company is the preparation and execution of a formal deed fairly and properly carrying out the arrangement thus considered, made binding upon and conclusive against both parties, and in part performed. At the same time, they emphatically repeat the assurance contained in my letter of the 12th ultimo, that they do not seek to extend or depart from the true meaning or effect of such terms, or to insist upon the extreme legal rights thereby accorded to them, and subsequently confirmed, but solely to secure a deed embodying an equitable interpretation thereof, as is evident by the fact that the draft contract, as last settled by them (and to which they again call the attention of Sir Charles Wood), secured to the Government important advantages not embraced by those terms.

It was with a view of procuring for both the Government and themselves an authoritative exposition of the status of the parties under the established agreement that the Directors submitted the case in question to Counsel, and then laid it, together with the professional opinion, before the Secretary of State, and if, by the accidental omission, from that case, of the statement of any fact or circumstance, they have failed to ascertain that status correctly, they are most earnestly desirous of being placed in possession of the particulars of such omission, being convinced that a correct interpretation of the existing arrangement hitherto acted upon and partly carried out, is the only proper basis upon which a formal contract can be completed, and they therefore, most respectfully solicit the particulars referred to in order that they may re-submit the case, accompanied by them, to Counsel, and inform Sir C. Wood of the result.

It is right I should add that the Directors, in accordance with their duty as representatives of those whose funds are to be expended, and having themselves subscribed a large portion of such funds, have from the outset watched the progress of their undertaking with great anxiety and care, and have maturely considered the information and statements received from time to time regarding it, including the Report of Major Orr, and the reply of their own Chief Engineer, which latter document, as well as the reply of the Government Consulting Engineer, the Secretary of State does not appear to have seen, and they are perfectly satisfied that nothing whatever has occurred, nor do any further difficulties appear, which they did not at first contemplate and now feel quite prepared to overcome. They are equally satisfied that the favorable character originally entertained of the work selected has been in no way lessened or detracted from, and they are convinced that with the co-operation of Government it can be most successfully executed, so as to confer considerable advantages upon all.

I may mention also, in conclusion, that many of the documents referred to in the case submitted to Counsel were appended to it in extenso, and that especially the papers described at page 16 of the printed copy forwarded to you as "Papers regarding the project that should be undertaken by the Madras Irrigation and Canal Company," were read by those gentlemen, and their contents fully discussed in conference with them.

I am, Sir,
Your most obedient Servant,
JOH WESTWOOD,
Secretary.

The Under Secretary of State for India.

INDIA OFFICE, S. W.,
3rd May 1861.

SIR,

I am directed by Sir C. Wood to request you will inform the Directors of the Madras Irrigation Company that he has read and considered your letter of the 20th of last month, but that he is not certain whether he is to understand from it, that the Directors definitively decline the proposal conveyed by him in mine of the 12th.

I am, however, to inform you, that Sir C. Wood adheres to that proposal, and will be obliged by a distinct acceptance or refusal of it. I am to add, that the further documents to which your letters refer are in the possession of this department.

With regard to your request, that Sir C. Wood will point out to you what subjects for consideration he considers to have been omitted by you, in the case laid before your legal advisers, I am directed to observe, that this cannot be done without affording materials for further and very unnecessary controversy, as the Directors have no doubt satisfied themselves of the sufficiency of the course which, in the interest of their Shareholders, they have pursued.

I am, Sir,
Your obedient Servant,
DE GREY & RIPON.

JOHN WESTWOOD, ESQ.

THE MADRAS IRRIGATION AND CANAL COMPANY,
27, CANNON STREET, E.C.
LONDON, 17*th May* 1861.

SIR,

The Directors having considered the contents of your letter of the 3rd instant, now instruct me to inform you that, having every desire to remove all matters of difference between the Secretary of State for India in Council and themselves, and to meet his views whenever possible, they are willing to accept the proposal made by Sir C. Wood in your letter of the 12th April last, so far as to adopt, as the work or project to be executed by the Company, that portion of the original scheme which commences at Soonkasala, and ends on the Eastern Coast, forming a complete water communication from the commencement to the Sea, which work is styled in your letter last referred to, " The Kurnool Section," but which henceforth, if so adapted, may be designated, " The Toombuddra project," upon the following conditions, viz. :—

(1.) That the Maury Tank and the channel from thence to the Toombuddra, as planned by the Chief Engineer of the Company, shall be considered to form part of such work, *if it shall appear, upon further investigation, and to the satisfaction of the Madras Government that, after setting apart water sufficient to irriagte every acre of land in Mysore capable of being irrigated therefrom, it will further afford to the Company an advantageous supply, and also if it shall then appear that the tank can be safely and securely constructed.*

(2.) That the annicut already commenced at Kurnool, the small canal of about two miles in length, starting from the southern side of such annicut, and now almost completed for navigation, and the proposed short junction canal from the Northern side of the same annicut to Pagtur on the Kistnah shall also be considered as belonging to the project of the Company, *if upon investigation, it shall satisfactorily appear to the Madras Government that after the completion of the reduced annicut as now intended, and the other proposed works, the town of Kurnool will not be endangered by flood to a greater extent than heretofore ; and if it shall then also appear that a line of Navigation Canal from the Kistnah to the Toombuddra, and from the latter to the Company's Main Canal, may be more advantageously constructed as thus planned and partly executed than otherwise ;*—or, That any other mode of effecting such communication which may appear to be preferable, shall be carried out by the Company.

(3.) That if the Maury Tank will not afford the supply before referred to, or cannot be safely and securely constructed, then that such other Reservoirs as may be necessary to afford the full supply required shall, as approved by the Local Government, form part of the Company's project.

(4.) That if any further Capital than the £1,000,000 now raised, and upon which the Guarantee of Interest has been given, shall be found necessary to complete the whole of the project and works before described, the Company shall be at liberty to raise such additional Capital, and to complete such project and works, and shall be entitled to receive all the profits arising from the Capital thus raised, the division of the returns from the two portions of the works being a matter of detail easily arranged ; but they shall not be entitled to or receive from the Government any Guarantee of Interest upon such additional Capital.

2. The Directors believe that the Maury Tank will be found to be the most favorable source of supply, because in 1859 its site and neighbourhood were examined by four Engineer Officers of the highest attainments and most extensive experience in hydraulic works generally, viz., Colonel Sir Arthur Cotton, Major General F. C. Cotton (both in the service of Govern-

ment), Lieutenant-Colonel Hugh Calveley Cotton (the Company's Chief Engineer), and Captain Rundall (the Government Consulting Engineer), and these, assisted by Major Dobbs, a most able non-professional Officer of Government, thoroughly acquainted with the locality, after carefully collecting information and discussing the matter closely on the spot, arrived, by different means, at a satisfactory conclusion as to the value of the Tank, and the sufficiency of the supply of water available, upon which the Reports of the Company's Chief Engineer and Captain Rundall, the Consulting Engineer, were founded. If, therefore, the decision thus come to is correct, no other site, *as Major Orr admits*, offers equal advantages; but as the Directors only desire this tank to be added to the proposed works, provided it is clearly to the interest of their undertaking that it should be so, and as Major Orr has expressed doubts upon the subject, though he never visited the site or neighbourhood, they would be glad to have the facts clearly ascertained by inquiry in the first instance, for they naturally feel that if the calculations of the Engineer Officers before named, supported as they were by Colonel Bell, the then Chief Engineer, Department of Public Works, and other competent officers, are substantially correct, it is manifestly for the benefit of all parties that the Tank and Channel in question should not be rejected.

3. With reference to the unfinished anicut and channel at Kurnool, and the connecting canal from the northern side of the Toombuddra to the Kistnah, the Directors are convinced that too much importance cannot be attached to the adoption of the most effectual means of drawing the very valuable and extensive traffic of the Nizam's dominions, including the city of Hydrabad, and ultimately of a large portion of the south Mahratta country, upon their main canal for conveyance to the coast and Madras, and they believe that this can best be done by the completion of the works in question; and, therefore, they consider those works to be really essential for the success of the navigation portion of the scheme. It must also be borne in mind in considering this subject, that the construction of this anicut at Kurnool, and the small southern channel leading from it, was begun and carried on at the urgent request of the Local Government, and with the full sanction of the Secretary of State, rightfully given, and that to complete them only a small sum is required; at the same time, if a better plan can be found, they (the Directors) will gladly adopt it.

4. I annex to this letter a Map upon which is sketched the project and works now intended to be described, and by which the value of the proposed communication with the Nizam's dominions and the South Mahratta country is conclusively shown.

The draft contract as last returned to Mr. Lawford by the Company's Solicitor, can be easily altered to embody the above arrangement, and if you will instruct the former gentleman to forward it to the latter, those alterations shall be made at once for the approval of the Secretrry of State.

I am, Sir,
Your most obedient Servant,
J. WESTWOOD,
Secretary.

The Under Secretary of State for India.

INDIA OFFICE, S. W.,
22nd June 1861.

SIR,

1. I am directed to acknowledge the receipt of your letter of the 17th ultimo, intimating the willingness of the Madras Irrigation Company to accept the proposals made by Sir C. Wood in my letter of the 12th April last, on certain conditions specified.

2. Before adverting further to these conditions, I am instructed to refer to the early negotiations with the Company, with the object of showing that the principles on which the acceptance of the services of the Company was originally based, have been scrupulously adhered to throughout on the part of the Secretary of State.

3. In Mr. Melvill's letter to you of the 30th September 1858, the following paragraph distinctly points out the basis of the proposed arrangement with the Company :—" Although " grave objections are urged by the Government (of Madras) against committing to private

" enterprise the construction of works of Irrigation, Lord Stanley is nevertheless disposed to " make *trial* of that mode of procedure, but he considers it desirable to confine the experiment " in the first instance to a single scheme, the estimated cost of which shall not exceed One " Million Sterling" ; and again, in the same letter :—" His Lordship will then consent to guarantee for twenty-five years, a minimum interest of Five per cent, on the capital, not exceeding One " Million Sterling, as it is paid into the Treasury of this House"; and on the Company urging, on the 5th October 1858, that a sum more proportionate to the prospective scope of the Company's undertaking would materially facilitate their operations, and that Two Millions was the amount specified in their Act of Incorporation, the reply of the then Secretary of State, on the 9th November 1858, was as follows :—" While Lord Stanley admits that it may be desirable hereafter to increase the Capital to the full amount which the Company are empowered " to raise, he considers it expedient to limit the present experiment to an outlay of £1,000,000, " reserving the question of granting a guarantee upon any further increase, until the benefits " resulting from the works have been ascertained" ; and, at the conclusion of the same letter, referring to the project for the irrigation of Cuttack, it is stated, " that Lord Stanley, looking " upon the contemplated operations of the Company in the Madras Territories as experimental, " must decline to consider any scheme for their extension, until he shall have better means of " judging how far the present experiment is likely to succeed."

4. On the 26th of August 1859, it was notified to the Company by Mr. Melvill, that of the irrigational schemes proposed, the one chosen by the Madras Government, was that known as the " Toombuddra Project."

5. The above extracts conclusively prove that the operations of the Company were limited to a single experimental work on the Toombuddra, the estimated cost, of which should not exceed one million.

6. In accordance with these terms, the Government of Madras was instructed to recognize the Agency of the Company, and a Consulting Engineer was appointed. Relying on the report of this latter officer, the Government of Madras was induced to sanction a proposal which originated with your Board of Directors, and was first mooted and earnestly pressed in your letter of 24th February 1860, to this Office. In compliance with the application therein made, permission was given for the immediate commencement of operations in the neighbourhood of Kurnool, at a point from whence it was originally intended that the portion of the general scheme of the Company, called the Kurnool Project, should take its rise. This project was represented as forming a self-constituted work. The cost of its execution was stated to be within the proposed limit for experimental expenditure, and although regular surveys, plans, and levels of the line were wanting, the information otherwise obtained "regarded from a professional point of view," was considered to afford sufficient proof of the expediency of commencing the works with the least possible delay.

7. Under these circumstances, and with these expectations, the construction of a Dam and the formation of an Irrigation and Navigation Canal were commenced, and with the admitted assistance of the Revenue Officers of Government, were being vigorously carried on, when it came to the notice of the Government of Madras, that the results of careful levels and surveys of the line did not warrant the expectations formed of it, and that it would be necessary to seek a source of supply at a level considerably above that, that could be obtained from an anicut at Kurnool, in order to avoid the excessive expense of a lengthened and deep cutting through a ride of rock at Mittacondal.

8. The Official Reports on this unfortunate and unexpected position of the operations of the Company, showed the necessity of the Government receiving with caution the propositions of the Chief Engineer of the Company and of their own Consulting Engineer, for rectifying the errors that had been committed, and to avoid further fruitless expenditure on that portion of the work which, under the revised scheme of the Company, appeared to be superfluous, the Government of Madras suspended the works in operation, pending an examination of the plans proposed in supersession of them, by Major Orr, an officer of undoubted experience in extensive hydraulic undertakings.

Proceedings of the Madras Government, Public Works Department, 3rd May 1862.

9. These proceedings of the Madras Government appeared to Sir Charles Wood not only judicious but necessary for the interests of the Shareholders of the Company, as well as of the Government, and they accordingly met with his unqualified approbation.

10. Since addressing you on the 16th April and the 3rd May, he has received from the Madras Government, their Resolution of the 25th March last, reviewing the Reports of Major Orr, and determining the extent to which the operations of the Madras Irrigation Company shall for the present be limited.

11. Looking to past events, and expenditure already incurred on the Kurnool Anicut and Canal, and to the general uncertainty of estimates for all works of the character of those in which the officers of the Company are engaged, Sir Charles Wood is of opinion that the Government of Madras has exercised a sound discretion in the selection, for present execution, of the works commencing at Soonkacala and terminating at Somaishwarum, estimated by Major Orr at Rs. 9,15,000, and by Colonel Calveley Cotton at Rs. 7,365,000; and he is satisfied that the amount proposed by the Madras Government as a reserve, is not more than sufficient to cover the contingencies which may arise in the execution of works extending over a large area, and liable to a variety of accidents. In the words of the Madras Government,—"It would be most unwise on "the part of Government to sanction, upon such loose estimates as have hitherto been submitted "by the Chief Engineer of the Company, and passed with too little investigation by the "Consulting Engineer, the commencement of all the works forming the proposed scheme. "All that Government can properly do is to sanction the commencement of such of the works "as form a scheme complete in itself, and the cost of which is not likely, after making fair allow- "ance for contingencies, to exceed the sum for which a guarantee has been allowed, namely, one "million sterling."

12. With regard to your proposition that the Maury Tank, and proposed channel thence to the Tumbuddra, shall be considered to form part of the present sanctioned project, I am directed to observe that irrespective of the present limit of the Company's capital, affording but barely sufficient means for the experimental works sanctioned, Sir Charles Wood considers that it would be highly inexpedient for him to enter into any engagement with the Company respecting a source of supply of their wants, in opposition to the objections of those to whom it more properly belongs, and whose objections are supported by the opinions of Engineer Officers of local experience, who do not concur in the views of the eminent gentlemen named by you.

13. I am further directed to observe that the anicut and canal at Kurnool are for the present excluded by the Madras Government from the works sanctioned, as forming no necessary part of the work of the first Section, and it must remain for the future consideration of that Government whether the completion of this canal for navigation purposes only, will be a desirable auxiliary to the sanctioned scheme, and how far the economical progress of the other works will warrant permission for its execution.

14. Being confirmed in the correctness of his views on this important subject as already made known to you, Sir C. Wood is unable to modify them to meet the propositions contained in your letter under acknowledgment, the more particularly as those propositions would involve a complication of unguaranteed with guaranteed capital, to which Sir Charles Wood has always entertained a strong objection. He has therefore only again to refer you to my letter of the 12th April, regarding the terms of contract between him and the Irrigation Company, and to the proceedings of the Government of Madras of the 26th March last, regarding the conduct of the experimental works to be carried on by the Company with the guaranteed capital of One Million.

I am, Sir,

Your obedient servant,

DE GREY & RIPON.

JOHN WESTWOOD, Esq.,

THE MADRAS IRRIGATION AND CANAL COMPANY,
27, CANNON STREET, LONDON, E. C. ;
28th July, 1861.

SIR,

Your Letter to me of the 22nd ultimo, has been most carefully considered by the Board of Directors, who have desired me to reply thereto as follows :—

2. The Board observed that by your present communication, as well as by others which have lately preceded it, it is assumed that the subject matter under discussion and to be disposed of between the Government and this Company, is the settlement of terms to be conceded to the latter to enable them to undertake and prosecute works, the determination of the nature and extent whereof is to belong to the former, and as this assumption is clearly based upon a misapprehension of facts, and may, if now allowed by them to pass in silence, place the Company in a false position, they desire it may be understood that they do not in any way concur therein ; indeed, it will be seen by the following statement that they cannot do so.

3. The passages quoted in your letter are selections from one side of a correspondence which took place pending a negotiation before the establishment of this Company, and which resulted in the adoption by both parties of the terms of agreement set forth in my letter to the Under Secretary of State of the 6th December, 1858. These terms were not only agreed to, but were forthwith confirmed by well-considered acts of the Government and the Company, and they therefore form a *binding contract, incapable of revocation or alteration, except by mutual consent.*

4. At the time these terms of contract were arranged, the scheme of the Company had not been placed before the public, but immediately afterwards it was, and in conformity with the last item, Prospectuses were publicly advertised, 50,000 Shares were issued, a Deposit of £1 per Share received, and the aggregate amount of £50,000 paid to the Secretary of State, so that the Company was unquestionably established and its capital raised upon the faith of the agreement thus concluded, whatever may be its proper construction and effect.

5. It was also under and in part performance of this same contract, that Lord Stanley, the then Secretary of State in Council, instructed the Government of Madras to select for construction by the Company, a scheme or project combining "Navigation with Irrigation :" that in compliance with such instructions, and under the most competent advice, the Madras Government selected the Toombuddra Project ; and that such work was subsequently offered by Sir Charles Wood to the Company (by Mr. Melville's letter of the 26th August, 1859) and accepted by them.

6. The extent and probable cost of this Toombuddra project was well known to the Local and to the Home Governments at the time it was selected, and offered to the Company, for it had been previously investigated by many of their own Engineer Officers, six of whom had reported that it would cost from £800,000 to £1,250,000 and no intimation of any kind was given to the Company, tending to raise a thought that the work so offered was to be subject to reduction.

7. The first item of the terms of Contract having been thus satisfied by not only the approval, but the actual selection of a work by the Local Government and its acceptance by the Company, other important proceedings based upon the same agreement were adopted on both sides,—for instance, amongst other things,—with the express consent of the Secretary of State further sums to a large amount were received from the Shareholders, and deposited in the Indian Treasury ;—an ex-officio Director was appointed by Government and a Chief Engineer by the Company ; —Executive Engineers to be distributed over the whole work were engaged in England and dispatched to India ;—general surveys and investigations were made ;—and Stores required specially for each of the several sections of the entire project were purchased,—all these matters involving a considerable expenditure of the Company's funds, and still further confirming the contract entered into. Again, in December, 1859, and in January, 1860, the Government of Madras caused it to be made known to the local officers of the Company that they desired that, the construction of portions of the work should be entered upon by the latter, in order to afford employment to the population then threatened with famine, and the Manager and Chief Engineer, being thereby induced to depart from their instructions, prepared for immediate operations, and wrote Home to the Board asking that the instructions of the latter—*which forbade construction until detailed plans, and estimates had been carefully prepared, submitted to, and approved by*

the Government and the Board,—might be so far modified as to allow of the execution of such parts of the scheme as would under any circumstances have to be made, and it was in consequence of this request that my letter of the 24th February, 1860, to Manager at Madras, written and submitted to the Secretary of State for approval.

8. I may here remark, parenthetically, that in order to show conclusively that the commencement of actual work, although approved by the Directors, originated with the Local Government, and not with the Company, as stated in your letter, I append hereto copies of the letters written at the time by the Manager and Chief Engineer, which letters also show the circumstances under which the plans and estimates of the works thus described by the Government and *being the estimates referred to in the 11th paragraph of your letter, were prepared*; and I must also add, that no statement of the nature implied in the 6th paragraph of your letter, viz., that the cost of the Kurnool section, of which the works undertaken at the request of Government formed a part, was within the limit fixed for experimental expenditure, was ever made by or on behalf of the Company, but the Kurnool section was always put forth and treated as part of the entire scheme.

9. Subsequently to the proceedings before mentioned, it having come to the knowledge of the Directors that Sir C. Wood entertained objections to an extension of the Guarantee of interest upon any amount of capital beyond the £1,000,000 already raised, they, with a desire to relieve him from all obligation in that respect, submitted for his approval a plan under which they undertook to raise whatever additional Capital might be required to complete the entire Toombuddra project *without a guarantee*, feeling it to be, not only part of their agreement that this should be carried out in its integrity, but also of the highest importance to the country proposed to be affected and to the interest of the Company, that it should be so. This proposed, although declared to be fair and equitable by the Counsel of Government, was declined by Sir C. Wood, and the original contract remained unaffected by it.

10. Failing in this and other endeavours to arrange matters, the Directors caused to be drawn up an impartial, and they believe most correct and complete statement of all the circumstances which had transpired from the outset, and placed it, together with copies of the various communications and documents to which it referred, before two eminent Counsel, with a view to secure an authoritative exposition of the status of both parties under the Contract, and having obtained the opinion of those gentlemen, they sent to Sir Charles Wood a copy thereof, as also of the case submitted. The opinion thus procured gave, as the Directors conceive, a most correct interpretation of the Agreement arranged with Lord Stanley. It stated that the Company were entitled to construct the whole of the Toombuddra project, and to raise any Capital required to complete that work beyond the £1,000,000 already subscribed, that strong reasons might be urged in favor of the legal view that the Guarantee of a minimum rate of interest should be extended to all additional capital so required,—that everything required by the Contract to be done by the Company, had been done by them,—that nothing had occurred to vary the original terms,—and that those terms had been conclusively affirmed by the Secretary of State in Council, and had established a Contract which according to the ordinary principles of equity would be held binding.

11. Contemporaneously with some of the foregoing occurrences, the Chief Engineer of the Company submitted to the Local Government a modified project, consisting of portions of the Toombuddra scheme so planned as—to bring the estimated cost within £1,000,000—to form one work, commencing at Soonkasala, and ending at or near to Kistnapatam on the coast, and—to provide irrigation for all the land commanded throughout its course, with a navigable communication from Kurnool to the sea—the upper channels and the means for storage of water being of the dimensions and extent necessary for securing and conveying the required supply for both purposes.

12. The Directors being really desirous to put an end to discussion and difference with the Secretary of State, and finding that Sir C. Wood declined to act upon the opinion they had obtained, expressed themselves willing to adopt this modified project complete. They are still ready to do this, as stated in my letter of the 17th of May last, but they feel that if such a compromise of the original terms is to be effected, it must be by adopting the modified scheme in its integrity as proposed and explained in the last-mentioned letter. The insertion of provisions to this effect

in the draft Contract is all the Directors desire, and they feel assured that upon further consideration Sir C. Wood will perceive that, it is not only reasonable but just that these should be inserted, and that the Directors cannot be expected to depart so entirely from the existing Agreement as to undertake and incomplete and unpromising work such as this modified project would undoubtedly be without the Nellore Section, having its lower terminus at Somaishwarum, inasmuch as the navigation portion would be almost useless,—the returns to be derived from the additional outlay made in that respect being manifestly dependent upon the line of communication being complete from Kurnool to the coast, whilst even the irrigation portion would be materially prejudiced by Nellore being excluded, indeed the commercial value of the work would be most seriously jeopardized.

13. To carry on the construction of the works between Soonkasala and Somaishwarum, *upon the scale and according to the plans prepared*, which provide for Irrigation and Navigation throughout, in the face of even a possibility of their ending at Somaishwarum, without previously securing the right to construct the concluding portion between the Somaishwarum and the sea (upon which the returns for at least one-third of the outlay to be thus made, will entirely depend), if the present capital shall prove insufficient, and without determining the terms upon which that additional capital shall be raised, would clearly be wrong on the part of the Directors, and it cannot be the wish of Sir Charles Wood that they should act thus, in fact a very large amount of money would be wastefully expended, if, when the works had reached Somaishwarum (a petty village, 50 miles from, and with no means of access to the coast) *and had been thus far constructed so as to store and provide water sufficient for the Irrigation of Nellore, and for Navigation through that District*, it should be found that they could proceed no further, and that the water which had been brought to that point could not be utilized by the Company.

14. By the adoption of an incomplete and expensive work like that suggested in your letter, the Company could not expect favorable returns for their expenditure, as the objects to be realized by such expenditure would not be complete.

15. According to the estimates of Colonel Cotton and Major Orr, the storage of water alone will cost £200,000, two-thirds of which at least will be required solely for the support of through navigation to the coast and for the irrigation of the Nellore District. The first section of the modified work, consisting of an anicut, and seventy miles of channel, including the cutting at Mittacondal, has been planned and is now being carried out upon a scale suited to the conveyance of the waters so stored, and the ordinary flow of the Toombuddra into the Koondair and Pennair Rivers, for the like double purpose of irrigation and navigation from Kurnool to the coast, and the second section from the cutting to Nundyal, a distance of twenty-four miles, is upon the same scale.

16. The whole of Sections three and four, which according to Major Orr's estimate will cost £205,000 have also been planned and will be required for the simple purposes of continuing the line of navigation from Nundyal to Somaishwarum and the conveyance of a large body of water to the latter place for the irrigation of Nellore. Therefore, of the £915,000 stated by Major Orr to be the cost of the works to Somaishwarum, a total of about £350,000, and of the £750,000 estimated by Colonel Cotton in respect of the same works, a total of £220,000 would be uselessly expended, if, when the water had passed down the Company's Canal and the Rivers Koondair and Pennair to Somaishwarum, it were allowed to flow on to the sea, and to this would also have to be added the larger expense which has been already incurred in surveying the Nellore district and in planning the contemplated works there,—working plans, drawings and detailed estimates having been thoroughly prepared, and everything got in readiness for immediate construction.

17. It is also most important and to be borne in mind that if a work of the estimated cost of less than £1,000,000 were entered upon, the Government would have power to alter the plans and works, and to order additional works, and no other limit could be placed upon the exercise of this power beyond a proviso that it should not be acted upon so as to increase the expenditure beyond the £1,000,000. The possible effect of this power is forcibly illustrated by the fact that the difference between the estimate of the Chief Engineer and Major Orr in respect of the works

to Somaishwarum is £140,000, and this solely caused by the proposal of the latter to increase the number of Locks on the river Koondair, and to construct such Locks in a more finished and expensive style than those proposed by the Chief Engineer, the latter being in the opinion of the Consulting Engineer of Government and Sir A. Cotton, most suited to the wants and requirements of the country, and the former unnecessarily expensive.

18. If Sir C. Wood is not prepared to secure the modified scheme in its integrity to the Company, it will only remain to ascertain the true construction and effect of the terms of contract set forth in my letter of the 6th December, 1858, and the proceedings had thereunder, and to execute a formal Deed framed accordingly. As, however, it appears that Sir C. Wood and the Company view those terms in different ways, the Directors propose that one of the following plans shall be adopted as best calculated to produce a satisfactory and fair settlement of the matter, viz:—

1. That the whole of the papers shall be placed in the hands of two Counsel, one to be named by each party, with simple instructions to prepare a Deed strictly based upon the terms stated in my letter of the 6th December, 1858, and the subsequent acts of both parties thereunder; and that such deed so prepared, shall be executed and be binding and conclusive,—or—

2. That the whole matter shall be referred to the arbitration of some disinterested person of position and character, with power to decide fairly between the parties; and that a Deed framed in accordance with his decision shall be executed by the Government and the Company, —or—

3. That a friendly suit shall be instituted by the Company, solely with a view of obtaining a Decree by the Court of Chancery, determining the nature of the contract entered into, and the formal Deed to be signed by both parties.

19. Before concluding this reply it is necessary to refer to the statements contained in the 7th and 8th paragraphs of your letter, connected with the works at Kurnool, and also to your observations regarding the proposed Maury Tank.

20. With reference to the first of these matters, it is sufficient to recount the fact that the circumstances under which the Chief Engineer considered it advisable to locate the source of supply for irrigation at Soonkasala have been already most fully explained by my previous letters, and by the official replies of the officer referred to, and the Consulting Engineer of Government, whereby it has been conclusively shown that no error having been committed, or wrongfull expense incurred in the construction of the works at Kurnool, the stoppage of those works by the then Government of Madras was both unnecessary and unjustifiable, and it is not correct, therefore, now to picture the Company as having been in an unfortunate and unexpected position, which created a necessity for the rectification of errors, and for the avoidance of further fruitless expenditure. Neither is it a fact that the works in question were superseded by others, or that they, under the revised scheme, appeared to be superfluous, for both the Chief Engineer of the Company and the Consulting Engineer of Government, insist that those very works are as essential to the modified as they were to the entire and original scheme, and those officers have lately, in this respect received the full concurrence of Sir Arthur Cotton, after his mature consideration of the subject, and with all the particulars before him. And regarding the Maury Tank, the Directors believe that Sir Charles Wood has misapprehended the nature of their proposal, and that when rightly understood, it will be at once acceded to. According to the Reports of several very able and practical Engineer Officers, Sir Arthur Cotton being one, this Tank will provide the whole of the additional supply of water required for the contemplated works between Soonkasala and the sea, at a cost of £145,000 only, and will at the same time, by irrigating a large tract of country sadly subject to famine from want of irrigation, produce a profitable return upon that outlay, so that the required supply to the works in question would be thus obtained without cost. But the storage of the same quantity of water by means of other reservoirs, it is agreed on all hands will cost £200,000, the whole of which sum would have to be added to the cost of the Main Works, and thus entail upon the Company an annual expenditure of £10,000, in the shape of interest thereon, whilst no additional irrigation will be afforded. Now if the

statements of these officers are correct, it is palpably to the interest of the Government, the Company, and for the good of the country, that the Maury Tank should form a part of the Company's project, and all the Directors ask is, that it may not be at once rejected because other officers have doubted its alleged capability, but that if after investigation it shall appear to the Madras Government to possess advantages over the other proposed reservoirs, and can be constructed at a smaller outlay it may be executed by them. On the one hand if this tank should appear to be not of the favorable character represented the Directors do not desire to undertake it, whilst on the other hand, they do not wish to incur an extra expense of £55,000, and to reduce their returns by £10,000 annually if they can avoid doing so, and the more especially if they can at the same time secure a tank remunerative in itself.

Lastly, I am desired to say that if Sir Charles Wood is desirous of receiving further and personal explanation of the views of the Directors, they will with pleasure, by a Deputation from their body, wait upon him in order to afford it, at any time he may name as most convenient for that purpose.

I am Sir,
Your most obedient servant,
JOHN WESTWOOD,
Secretary.

The Under Secretary of State for India.

DOCUMENTS REFERRED TO IN THE FOREGOING LETTER.

1.—*Letter from the Company's Chief Engineer to the Manager.*

15th January, 1861.

I have intimation that the Government wishes to know when I shall be prepared to commence any works, the inquiry arising from an expectation of scarcity and consequent necessity of providing work for the people.

I am quite prepared to send the Government such estimates as they may give their assent to, for some main works immediately, but we have not authority from home. What can be done? I cannot suppose that the Board would object under the circumstances, to our entering upon such works, as must form part of the undertaking, on the approval of the local Government, and it might give us a considerable advance in our operations, if this apprehended scarcity operates to any great extent.

Colonel Arthur Cotton has sent the Governor the copy of my report and rough estimate, which I sent to him for you, in reply to your question, and I think that if the Government approves, and you judge that we may anticipate the approval of the Board, I had better draw *such plans, and make such estimates as, my present materials admit of, and submit them through the Consulting Engineer, subject to modification when the more perfect plans can be furnished.*

Will you let me know what you think we may do? I should be delighted to make the most of this working season, if it can be considered a legitimate departure from my instructions. The commencement of any of the principal works would delay my preparation of *more perfect plans and estimates.*

I am interrupted by a telegram from Colonel Bell to the effect that the Governor wishes to see Captain Rundall and myself, at Trichinopoly, on the 17th instant, and that he had replied that neither of us could be there by that time.

This indicates a pressing desire on the part of the Governor, to put us on to the works, and I am sure no one connected with the Madras Irrigation and Canal Company would desire to damp His Excellency's ardor, or lose a moment of such a season for progress.

I should be very short of apparatus for a time, but with abundant hands, I should feel it the less, and at all events nothing would be lost.

I shall send this to Madras, and a telegram to meet you at Bangalore.

2.—*Letter from the Company's Manager at Madras, to the Secretary of the Madras Government.*
25th January, 1860.

I have received a letter from Colonel H. C. Cotton informing me of the apprehensions which exist in the mind of Sir Charles Trevelyan, concerning famine in Kurnool and Bellary, and of Sir Charles's consequent anxiety that the works of this Company should be forthwith commenced. I enclose a copy of Colonel Cotton's letter.

I regret to say that our instructions to defer the commencement of our works are very definite. Immediately on their receipt, I wrote requesting a relaxation of them as far as that section of our works is concerned, which lies between Kurnool and Mittacondal.

The famine is a new and pressing argument in favor of my recomendation; I trust, therefore, that I am acting as the Board would wish me to do in now writing my assent to Colonel H. C. Cotton's proposal, that he should be permitted to get to work this season, and that he should forthwith submit drawings and estimates of that portion on which he proposes to commence operations.

The matter has not yet come before us in an official form. On this account, and because Captain Rundall has not yet reached Madras, I address these few lines to you.

Colonel H. C. Cotton will of course commence upon such works only, as from their nature and situation leave least room for professional differences of opinion—on this point the Board is already in possession of his views.

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3. *Letter from the Company's Manager to the Secretary.*
28th January, 1860.

I beg to hand you herewith, copies of the following correspondence relating to the wish of Sir Charles Trevelyan, for the immediate commencement of works.

Colonel H. C. Cotton's letter of 15th January, 1860, and mine to Mr. Bourdillon of 25th ditto.

The Board will observe that on the representation of our Chief Engineer, I have assented to the early commencement of a small portion of the Company's works, as soon as the plans and drawings connected with it are approved by Government.

I must at the same time inform the Board, that Captain Rundall is much in favour of an immediate commencement.

I trust that the Board will consider the above as a departure from the letter, rather than from the spirit of their instructions, and that they will approve of the course which the weighty reasons urged by Colonel Cotton led me to adopt.

"India Office, S. W.,
"*13th August* 1860.

Sir,

"I have laid before Sir Charles Wood your letter of 28th ult., relative to the nature and "extent of the work, the execution of which, by the Madras Irrigation and Canal Company, has "received the sanction of Her Majesty's Government.

"In reply I am directed to observe that Sir C. Wood declines to enter into the questions "raised in the first portion of your letter, further than by stating that he by no means admits the "correctness either of the statements made, or of the opinions expressed there. With regard to "the proposals with which your letter concludes, he desires me to refer you to Earl de Grey's "letters of 22nd June, and 12th of April last, as containing the resolution at which he has "arrived, and from which he is not disposed to depart in any particular.

"I am, Sir,
"Your obedient servant,
"HERMAN MERIVALE."

"John Westwood, Esq.,
"27, Cannon St., E. C."

CASE SUBMITTED ON BEHALF OF THE MADRAS IRRIGATION AND CANAL COMPANY, TO MR. ROLT, Q.C., AND MR. J. H. LLOYD, FOR THEIR OPINION.

The formation of the Madras Irrigation and Canal Company was officially announced to the Court of Directors of the late East India Company on the 4th February 1857, by Mr. Westwood, its projector, and on the 14th of the following month (March 1857), a further communication was made to that Court by him, accompanied by a printed draft Prospectus of the Company, which had then been registered under the Limited Liability Act.

This letter and the Prospectus are only important as showing that a Guarantee by the East India Company of Interest on the Capital to be raised was considered to be essential to the success of the Company, and that it was intended to select a specific project or work for first operations; for instance, the Prospectus stated the objects of the Company to be "The construction, "maintenance and working of Irrigation works, and Navigable Canals throughout the Presi- "dency of Madras and adjacent territories;" and described the Capital thus: "First Capital "1,000,000*l.*, in 50,000 Shares, of 20*l.* each." It also contained amongst others, the following observations:—

"The Directors are in communication with Colonel Arthur Cotton (the great authority "upon works of Irrigation in India), who is now at Madras, as to the most eligible work "to be first constructed. * * *

"Negotiations have been commenced by the Board of Directors with the Government "for securing to this Company the necessary powers for constructing and maintaining "throughout the Presidency of Madras, a comprehensive system of Irrigation works and "Canals, and for working and navigating the latter in the usual way, commencing with such "undertaking as shall be agreed upon with the Court of Directors.

"Application will also be made to the East India Company for a Guarantee of a mini- "mum rate of Interest, and the remainder of the revenue to be derived from the works or "an adequate portion thereof, and until this Guarantee has been obtained no further pay- "ments will be required from the Shareholders than the deposit of 2*s.* per share.

"So much only of the proposed Capital of 1,000,000*l.* as will be sufficient to carry "out the particular undertaking which shall form the first portion of the intended system "of works will be first called up; the remainder will not be required till after these works "are finished. All future increase of such Capital as may be required to execute the other "portions will be allotted *pro ratâ* amongst the then Shareholders, exclusive of such reserve "as may be considered necessary to be made for India."

No particular project having been fixed upon or investigated at this early stage, the first issue of Capital was temporarily fixed at 1,000,000*l.*, as that amount was then considered sufficient to cover a complete work; the largest scheme of works of the nature contemplated, which up to that time had been undertaken by the Government, viz.: those connected with the Godavery River, having been estimated to cost not more than 500,000*l.*

At the date of the communications just referred to, the Guarantee system of the Indian Government was notorious and well understood by English Capitalists, having been in existence for some years previous, in connection with every Company then established for constructing Railways in India except one which afterwards came under it. As, however, this system may prove to have a most material bearing upon the present narrative, it seems advisable that its leading points should be described, and this can best be done by stating the substance of the Contracts which had then been entered into between the Government and the Guaranteed Indian Railway Companies.

These contracts after reciting—

1stly. The formation and objects of the Company, together with the capital then subscribed for.

2ndly. The fact that Government had agreed to co-operate with such Company for the construction of a line of Railway between stated termini.

3rdly. That the Company were to pay into the Treasury of the East India Company the said capital, which was the amount upon which interest was agreed to be guaranteed, and which was known in every case to be insufficient for the completion of the entire work.

Contained the following stipulations:—

1st. That the East India Company should select the route and direction of the line between the stated termini.

2nd. That the East India Company should give notice to the Railway Company, of such selection, or of any plan of any parts of the whole line they might from time to time fix upon.

3rd. That the Railway Company should complete the line as selected and approved by the East India Company, with such alterations, extensions, or limitations, as the East India Company should at any time direct.

4th. That the land required for the Railway and the works connected therewith should be provided by the East India Company, and leased to the Railway Company for a term of 99 years free of expense.

5th. That the Railway Company should construct the Railway, and all such stations, offices, warehouses, fixed machinery, and other works and conveniences, as in the opinion of the East India Company should be necessary.

6th. That the East India Company might require any part or parts of the line of Railway to be completed, and to be opened for the conveyance of passengers, goods, &c., as and when they pleased; and that when such line or any part or parts thereof should be completed and ready to be opened, the Railway Company should (subject to the supervision and control presently adverted to), provide good and sufficient rolling stock, &c., for working the same, and should commence and carry on the business of common carriers thereon, running such a number of trains, at such times, and at such rates of speed, and between such places, and with such conveniences, &c., as the East India Company should from time to time require, allowing also the use of the Railway to the public on terms to be approved by the East India Company.

7th. That the Railway Company should maintain and keep in repair, the line, machinery, rolling stock, &c, to the approval of the East India Company, and if default should be made in this respect, the East India Company should be at liberty to make such repairs, and charge the cost against the Railway Company, and to deduct the amount and expenses from any money payable to the Railway Company.

8th. That the Railway Company should charge only such fares and tolls as should be approved by the East India Company. Power being reserved to the East India Company to reduce such fares and tolls when the net receipts should exceed 10 per cent. on the outlay, and so that such net receipts should not exceed 10 per cent.

9th. That the Railway Company, their Officers, Servants, and Agents, should in all things be subject to the superintendence and control of the East India Company, who should be at liberty to appoint an ex-officio director to attend the meetings of the Directors, and act in all respects as a Director, and with a right of veto on all proceedings of the board.

10th. That the capital first raised (being the amount fixed as before stated), should be paid into the Treasury of the East India Company, as the East India Company might direct, but so only as would consist with the provisions of the Act incorporating the Railway Company.

11th. That all expenses of the Railway Company, as between the East India Company, and themselves, should be allowed only so far as the same might have been sanctioned by the East India Company, and should be drawn from time to time by drafts upon the Indian Treasury.

12th. That a capital account relating to the construction of the Railway of all expenditure should be kept, containing only such sums as had been sanctioned by the East India Company, and that when the line of Railway, and any additional works directed to be made by the East India Company should be completed, such capital account should be closed, and the aggregate amount agreed upon.

13th. That the East India Company should guarantee for a period of 99 years interest at a given rate, (mostly 5¼ per cent.) upon the first fixed amount of capital raised and paid unto the Indian Treasury.

14th. That if the expenditure of the Railway Company in the construction of the Railway and works, or otherwise in respect of the matters to be included in the capital account, should exceed the last mentioned capital so raised and paid, the Railway Company should raise such extra capital, and pay it into the Indian Treasury, and the East India Company should pay interest thereon at the guaranteed rate from the times of payment.

15th. That the revenue of the Railway as received, should be paid into the Indian Treasury without deduction, and that the current expenses of the Railway Company, of carrying on the undertaking, should be drawn from the Indian Treasury, as and when sanctioned by the East India Company.

16th. That the profits arising from the Railway after all deductions for repair and maintenance of the Railway and works, and restoration of rolling stock, &c., as allowed by the East India Company, and after setting apart a fund for contingencies, should be applied in the first case in payment of the current interest payable by the East India Company, and the residue should be divided into two moieties, one moiety to be applied in payment of any interest previously advanced by the East India Company, with simple interest upon such advance at 5 per cent. per annum, and the other moiety should be paid to and applied for the use and benefit of the Railway Company; and when the whole of the monies previously advanced by the East India Company were paid, both moieties should belong to the Railway Company.

17th. That the Railway Company should at all times convey the Government Mails, Officers, and Servants of the Post Office, &c., free of charge, and also when on duty, Military Officers, Troops, and all stores and artizans on the business of the East India Company, at certain stated fares and in preference to their general business.

18th. That at the expiration of the term of 99 years, the Land, Railway, Buildings, Works, Machinery, &c., and the whole of the property of the Company (except the Rolling Stock used in working, the Railway), should revert to and become the property of the East India Company, who should then be bound to purchase, at a valuation, the Rolling Stock, &c.

19th. That after any portion of the Railway should be finished and in work for three months the Railway Company should be at liberty, after six months, to give notice and to transfer to the East India Company, and the East India Company should be bound to accept the Railway and works, and to pay to the Railway Company the Capital expended up to that time, and to transfer to the Railway Company the portion of its Capital remaining unexpended.

20th. That at any time within six calendar months after the expiration of the first twenty-five years, or within six calendar months after the expiration of the first fifty years, the East India Company should be at liberty to purchase the Railway and Rolling Stock, &c., at the full amount of the value of all the Shares or Capital Stock of the Company, calculated according to the mean market value in London of such Shares or Stock during the preceding three years.

21st. That if default be made in payment of the first or any further Capital, or in the due application of any monies drawn from the Treasury, or in the execution of the works, or in case the Railway should not be worked to the satisfaction of the East India Company, or in case of any breach of covenant by the Railway Company, the East India Company might by notice terminate the contract and take possession of the Land, Railway, Rolling Stock, &c., paying to the Railway Company the amount of Capital expended, and returning the unexpended portion thereof.

22nd. That in every one of the cases referred to, where purchase money would have to be paid by the East India Company, the latter might, instead of paying a gross sum, pay an Annuity to be reckoned from the time when the gross amount would be payable and to continue during the residue of the term of 99 years.

And

23rd. That if, after the Railway and works were completed and the working Stock furnished, &c., the whole of the Capital raised by the Railway Company should not have been expended, the surplus should be returned to the Railway Company, and the Guarantee be held to be applicable only to the amount actually expended.

These terms have been set out somewhat carefully and fully, because they were the terms which the Directors of the Madras Irrigation and Canal Company knew to constitute the existing Indian Guarantee system, under which they sought to bring their undertaking, the first of its kind formed in this country.

On the 31st March 1857, the Directors of the Madras Irrigation and Canal Company addressed a letter to the Court of Directors, in which they fully explained their views regarding the objects to be effected by their contemplated enterprize, and solicited from the Court such aid as would enable them to raise the required Capital in England, adding that it was their strong impression that British Capitalists and the English public, as the basis for investment in Indian projects, looked for " terms similar to those which have been already entered into between the " Government of India and the Scinde and other Indian Railway Companies, including a " Guarantee by the East India Company of a Minimum Dividend at the rate of 5*l.* per cent. per " annum, upon the Capital raised, and the receipt by the Shareholders of the further revenue to " be derived through their undertaking ;" and they also adduced reasons which appeared to them to be of a most forcible nature, why works of Irrigation were, at least, as deserving of this support as Railways, and indeed more so, as the proposed attempt to draw English Capital to their construction was the first of its kind, and was an experiment of the highest importance.

This letter was written to form the groundwork of an interview proposed, and subsequently had, between the Court of Directors and a Deputation representing the Company, but it is unnecessary to state the proceedings at this interview because the result is embodied in the following letter subsequently addressed to the Secretary of the Company.

EAST INDIA HOUSE,
8th May 1857.

SIR,

The Court of Directors of the East India Company have had under their consideration the several communications of the dates referred to in the margin, addressed to them by you as Secretary to an Association called the Madras Irrigation and Canal Company (Limited), with which you forwarded a Prospectus and other papers illustrative of the objects which the Company had in view.

4th February 1857.
14th March ,,
24th ,, ,,
15th April ,,

These objects are stated to be the construction, in the Madras Presidency and the neighbouring Native States, of works of Irrigation, with the view of promoting the fertility of the soil, and of Canals, to provide cheap transit to meet the requirements of commerce.

The Court observe that the point which the Company appear to regard as of paramount importance, for the purpose of enabling them to raise the required funds in this country, is the grant of a guarantee by the East India Company of a minimum dividend at the rate of five per cent. per annum on the amount of the subscribed capital. While the Court fully recognize the importance of promoting the construction of public works having for their object the advancement of the material prosperity of the territories committed by Parliament to their charge, they object, in this instance, to the grant of a guaranteed rate of interest on the sums to be expended by a Joint Stock Company for that purpose, and they must accordingly decline to comply with that portion of the plan which you have submitted to them.

If after this intimation of the Court's views on this point, the Company should desire to suggest any specific work which, in their opinion, might be undertaken by them without such guarantee, the Court will be prepared to take the proposal into their consideration, and, in the event of its receiving their approval, to give to the Company which you represent all the assistance and encouragement which could properly be afforded in furtherance of their objects.

I am directed to add that, in the judgment of the Court, any such work should be of such a nature, that the returns to be derived from it by the Company shall be made in such a distinct form as not to be liable to be mixed up or interfere with the payment of the ordinary land revenue of the Government, and moreover, that the terms on which the Company should be authorized to construct the works could only be satisfactorily arranged in communication with the local authorities.

I am,
Sir,
Your most obedient, humble servant,
JAMES C. MELVILL.

J. WESTWOOD, ESQ.

The Court of Directors here also clearly dealt with the matter upon the footing, that a specific work was to be undertaken, and carried out by the Company.

Shortly after the receipt of the letter just set out, the Company were put in possession of the outlines of two specific projects, traced in the accompanying Map, that coloured Blue being designated the Coimbatore scheme, and that coloured Red the Toombuddra scheme. These works, it will be seen, were altogether distinct and separated from each other, but each formed a complete work in itself; and on the 6th June 1857, particulars of both were placed before the Court of Directors, as the works to be first undertaken, accompanied by a letter, in which the Directors of the Company urgently solicited the grant of a guarantee upon the capital necessary to carry them out.

This letter distinctly evidenced two things—1st. That the terms of support solicited were clearly understood to be similar to those embraced by the existing guarantee system, with this exception, viz., that the Government should participate in the profits to be derived; and 2nd, That such aid was required to enable the Company to construct to completion two works, for the application was for a guarantee to cover the whole capital required to carry them out, and it was distinctly stated that their cost could not be estimated until minute surveys had been made, and detailed plans and estimates prepared; the expense whereof could not be incurred until the terms upon which the enterprise was to be undertaken had been arranged, &c. There was no ambiguity as to the works, and it was stated that the Company intended to confine themselves to them in the first instance.

The Court of Directors replied as follows to the proposal thus made by the Company :—

EAST INDIA HOUSE,
27th August 1857.

SIR,

I am commanded by the Court of Directors of the East India Company to acknowledge the receipt of the letters addressed to me on behalf of the Madras Irrigation and Canal Company, under date the 6th June and 3rd ultimo,* and to inform you that the Court having given their best consideration to the proposals submitted to them, are prepared to give the Company all the assistance and encouragement which can properly be afforded in furtherance of the objects they have in view.

Those objects the Court understand to be:—

1st. The providing by means of the waters of the Toongabudra Irrigation and Canal transit to portions of the Districts of *Bellary*, Kurnool, Cuddapah and Nellore, and the formation of a second channel from the opposite bank of the same river, to water the Raichoor Doab, one of the Districts lately assigned by the Nizam.

2nd. The Irrigation of the District of Coimbatore, and of the Southern portion of Malabar, and the connection of the Western and Eastern Coasts across those Districts, with the Districts of Trichinopoly and Tanjore, from the mouth of the Ponany on one side, to the Port of Negapatam on the other.

The Court are prepared at once to forward for the consideration of the Governor in Council at Madras, the proposals submitted by the Company, but they consider that the scheme of the

* This merely solicited a reply to the previous letter.

Company, their plan of operations, their means of executing them, and their probable cost are not before the Court in a sufficiently matured shape to enable them to decide as to the degree of assistance they should be justified in pledging themselves to afford.

I am directed therefore to suggest that the proposals of the Madras Irrigation and Canal Company should be laid before the Court in a more detailed and definite shape, and especially that the nature and particulars of the assistance which it is proposed that the Court should afford to the project in question should be distinctly specified.

In thus consenting to entertain the propositions of the Company, and to place them before the local authorities, the Court direct me to remind you that in these, and in all similar cases, every respect must be paid to the rights of the owners of land, whether Native States or individuals, through whose property such works may be taken.

I am, Sir,

Your most obedient, humble Servant,

JAMES C. MELVILL.

J. Westwood, Esq.

This answer, like its predecessor from the same quarter, dealt with the proposals of the Company in the same spirit as that in which they were made, viz., as proposals to enter upon and carry out to completion entire works.

In accordance with the request of the Court, the Secretary of the Company, on the 15th September 1857, in a letter of that date, laid before them a clear statement, describing the scheme of the Company, and also its proposed plan of operations. It is only necessary here to specify the latter, which was thus given, viz., "To undertake and carry out the two works before described, the same having been selected as exemplary works, for the purpose of showing to British capitalists the nature and value of the contemplated undertaking as a means for the safe and profitable investment of capital." He also asserted that it was impossible to arrive at even an approximate estimate of the cost of these experimental works until careful surveys, &c., had been made, the expense of which the Directors did not wish to incur until they knew that the aid they solicited would be granted; and that to enable the Company to raise the capital requisite for *carrying out* the two projects in question, it was essential that a guarantee of interest thereon should be conceded, and that the land required should be secured to the Company in the same way as land had been secured to the Railway Companies.

On the 6th October 1857, the Court of Directors intimated by letter to the Madras Irrigation and Canal Company that a copy of the letter just described, together with previous correspondence, had been transmitted to the Local Government at Madras for their consideration and report, and that the whole subject regarding the execution of works of Irrigation in India by private enterprise had been referred to the Government of India at Calcutta.

Copies of the dispatches thus referred to have since been obtained by the Company. In that addressed to the Governor General, the Court stated their desire that the whole question as regarded the employment of the agency of private associations in the construction of remunerative public works, and particularly of works of Irrigation and Navigable Canals, should receive his mature and deliberate consideration;—and with that to the Madras Government they forwarded the correspondence had with the Madras Irrigation and Canal Company, and requested that Government to report their opinion whether their was any valid reason against the acceptance of the offer of that Company to commence operations in respect of the works in question, on such conditions as the Governor General of India might determine to be applicable to such Companies in general, and also their opinion regarding the two specific works proposed to be undertaken *as experimental works*.

As appertaining to an explanation of the limitation subsequently inserted in the arrangement come to; the following quotation from the former of these dispatches may be found not unimportant:—

"We are disposed to agree generally in the opinion, that the sums to be granted
"to Irrigation or Canal Companies should be very much the same as those which have

"been conceded to Railway Companies in India. If the proposed undertakings be well "selected, (on which point the responsibility of the decision should rest with the Local "Government), the risk involved in the guarantee of a moderate rate of interest is, we "apprehend, but inconsiderable; whilst we are assured that without such guarantee, it "will be impossible to raise the required capital in this country. With the view, how- "ever, of discouraging the formation of Companies by persons having no real intention "of establishing in India works of permanent usefulness to that country, no guarantee "should in any case be given, except on a specific amount of capital to be applied to some "well-defined project, which should be subject to the previous approval of the Local "Government. Beyond the guaranteed rate of interest, the profits derived from the under- "taking might be divided in such portions, and for such a term as might appear fair to "you and the Local Government; which, as it secures the private association from possi- "ble loss by guaranteeing such a minimum return as will be sufficient to obtain the "subscription of the requisite capital, is certainly entitled to a large share of all profits "beyond a handsome maximum. On the expiration of the term agreed on, the right "should be reserved to the Government to take the works at a valuation."

Acting upon the instructions contained in the latter of the dispatches just adverted to, the Madras Government placed the whole correspondence before their Chief Engineer for his consideration and report, and desired him, after he had consulted the Superintending Engineers and other Officers of the districts to be affected by the two contemplated projects, as to their practicability, probable cost and returns, to report fully thereon for their guidance. They also required a report from the Board of Revenue, after the latter had ascertained the opinions of the various Collectors of the same Districts; but in a letter to the Home Government, dated the 27th November 1857, (written before their final report, and before the full information they had asked for was before them), they expressed objections to entrusting works of Irrigation to private Companies.

After a lapse of several months the Engineers and Collectors to whom plans of the two projects had been referred, sent in their reports to the Madras Government; but it will be necessary to refer only to those of the Engineers who reported upon the Toombuddra project. These Officers possessed the highest professional qualifications, and were perfectly acquainted with the tract of country to be traversed; indeed, their attention had been for some years previously drawn to a scheme for constructing Irrigating and Navigable Canals through the same Districts by means of the same source of supply as those proposed for the Toombuddra project. Two, viz., Captain Collyer and Lieutenant Stewart, both of whom had shortly before personally examined the localities, and had paid considerable attention to the matter, estimated the entire cost of the project at 1,250,000*l.* that is, including all contingencies, and this estimate was concurred in by Major Lawford, who had previously professional charge of the Territory, and had himself some time before submitted and advocated a plan for a grand Irrigating and Navigable Canal from the Toombuddra above the Wurdah to the coast, whilst Captain Orr, an Officer of great experience in the construction of works of Irrigation in Southern India, and who was also acquainted with Bellary, Kurnool, and Cuddapah, and had looked into the details of the scheme as far as was possible, at that time, gave it as his opinion, that it could be carried out for 835,000*l.*, and the then Chief Engineer of Madras, the officer to whom all the others were subordinate, coincided with this view, and stated that "he was strongly of opinion that such "amount (835,000*l.*) would more than suffice to cover the expenses of the actual construction of "the whole Canal."

Of course the estimates thus put forth were approximate only, and made without knowledge of the details of the Toombuddra project, but this was all that could then be arrived at, as the Company had stated their inability to enter upon minute surveys, &c., until they had arranged terms with the Government, at the same time, the country was well known, and portions of the route to be traversed had actually been surveyed and levelled by the Government Officers.

The Madras Government transmitted the whole of these Reports and Documents *in extenso* to the Court of Directors, accompanied by a letter in which they urged strongly the impolicy of

entrusting works of Irrigation to private Companies, and raised objections to the two proposed works on the ground that they would interfere with existing works of Irrigation fed from the same sources.

It is worthy of passing remark here, that the project submitted by the Company for utilizing the waters of the Toombuddra and Pennair, was first styled the Toombuddra project, by one of the Engineers of Government last referred to, and that name has been since retained.

Pending the prosecution of the enquiries instituted by the Madras Government, a continuous correspondence was carried on in England, between the Secretary of the Company and the Court of Directors, to which it is unnecessary to refer beyond stating—1st, that it embodied various proposals by the Company for the immediate commencement of operations, without waiting for the required reports from Madras, treating throughout the support solicited as similar to that secured by the Indian Railway Companies; and it referred to the two projects as the first contemplated works to be carried out by the Company; and 2ndly, that in one of the letters from the Secretary of the Company, it was stated for the first time, that according to a rough estimate, believed to be substantially correct, the two works could be carried out for £2,500,000, and a guarantee upon £2,000,000 was solicited.

Cotemporaneously with the events lately narrated, a Bill which had been deposited in Parliament for the incorporation of the Company, was passed through its various stages, with the recorded consent of the Board of Control and the Board of Directors, after full consideration by those authorities of its provisions.

By clause 14 of the Act thus obtained, it was enacted, "That the Capital of the Company shall be, in the first instance, the sum of £2,000,000 sterling, in 100,000 shares of £20 each," whilst those clauses which enabled the Company to make arrangements with the Indian Government were precisely similar to those contained in the Acts incorporating the Indian Railway Company.

In July 1858, the receipt by the Court of Directors of the Report of the Madras Government became known to the Directors of the Company, who immediately applied for a copy, but this request was not complied with during the existence of the Court.

The Act of Parliament (21 and 22 Vic., cap. 106) transferring the Government of India to the Crown, came into operation on the 1st of September 1858, and thereby all the powers then exercised by the East India Company became vested in the Secretary of State in Council of India.

By clause 67 of this Act it was provided that "All treaties made by the East India Company should be binding on Her Majesty, and all Contracts, Covenants, Liabilities and Engagements of the East India Company made, incurred, or entered into before the commencement of that Act, might be enforced by and against the Secretary of State in Council in like manner and in the same Courts as they might have been by and against the said Company if that Act had not passed."

The matter connected with the Madras Irrigation and Canal Company being thus transferred to the Secretary of State (then Lord Stanley) in Council, the pending negotiation was resumed, and a correspondence thereon took place which, for the due consideration of the legal rights of the Company, it will be advisable should be perused in detail; but in order that the present document may contain a continuous and complete narrative of events to the present time, it is only necessary that a sketch of their substance and purport should be given. Before this is done, however, it will be well to state that it must be borne in mind in considering the proffered terms of the Secretary of State there discussed, that at the time of the transfer of the Government of India to the Crown the proposals of the Company to construct two works of the roughly estimated cost of 2,500,000*l.*, and their request for a guarantee of interest upon 2,000,000*l.* had been reported upon adversely by the local Government of Madras, who had raised grave objections against entrusting to Private Companies such works, which objections, it is known, were concurred in and supported by several members of the New Council of India, and therefore the Secretary of State being called upon to act in opposition to these representations, was doubtless,

constrained to limit the first operations of the Company, and to treat those operations as an experiment, whatever his own ideas were at the time.

With this explanation the letters in question may be thus described.

In the 1st, the Under Secretary of State, on the 30th September 1858, "in continuation of previous correspondence," stated, that a reply to the reference made to the Government of Madras on the proposals of the Company had been received. That although grave objections were urged by that Government against committing the private enterprize to construction of works of Irrigation, Lord Stanley was nevertheless disposed to make trial of that mode of procedure, but considered it desirable in the first instance, to limit the experiment to a scheme the estimated cost whereof should not exceed 1,000,000*l.* That of the two works proposed by the Company, Lord Stanley considered the Toombuddra scheme decidedly the more eligible, but it was possible the Madras Government might be able to suggest a third preferable to either, upon which they would be consulted, and be instructed to prepare an approximate estimate of the cost of such selected scheme, whereupon his Lordship would consent to guarantee for 25 years a minimum interest of 5 per cent. upon the capital not exceeding 1,000,000*l.* sterling. That the various works comprehended in the project selected for the commencement of operations by the Company, should be constructed conformably to plans approved by the Local Government, and be maintained in efficiency at the expense of the Company. That the Government should decide in what manner the returns should be levied, and should also have the option of purchasing the water supplied for Irrigation at a price to be agreed upon with the Company. That the surplus returns from all sources after payment of expenses and the Government interest, should during a period of 25 years be equally divided between the Government and the Company. That after the expiration of such 25 years, the Government should have the option of purchasing the whole work at its original cost. That his Lordship reserved to himself the same power of supervision and control over the proceedings, preliminary expenses, and future expenditure of the Company, as he possessed over those of the guaranteed Railway Companies, and added, "Lord Stanley will be glad to learn the sentiments of the Company on the foregoing propositions."

In the 2nd, the Secretary of the Company, on the 5th October 1858, in reply, set forth the grounds upon which the Directors solicited the right to construct the two proposed projects, and urged the policy of their being allowed to do so; adding, however, "that should his Lordship not concur in this view, the Directors would not object to confine their attention, in the first instance, to one only of the works specified, and of those to commence with the Toombuddra project." He then stated full, and, as considered by the Directors, most cogent reasons, why that work should be at once adopted without any further reference to the Madras Government, and went on to press upon the Secretary of State in Council the advisability of extending the guarantee to the capital of 2,000,000*l.*, that amount having been fixed by the Company's Act of Incorporation. Then dealing with the stipulation that "the Government should after "the expiration of 25 years have the right to purchase the work at its original cost," after stating plainly the objections of the Directors thereto, he proposed that in lieu thereof, similar provisions to those contained in the Indian Guaranteed Railway Contracts should be adopted, viz.: That should the Company wish at any time to surrender the rights which had been accorded to them, the Government would accept such surrender, and pay back to the Company the capital invested, and that on the other hand, should the Government wish to take into their own hands the works of the Company, they should have the right to do so after the lapse of 25 years, on paying the market value of the capital stock of the Company; and lastly, with regard to the profits, exclusive of Irrigation, he submitted the views of the Directors, shewing that the Company were entitled to receive the whole of the profits derived from navigation, and accepted in other respects the basis of arrangement as laid down in the previous letter of 30th September.

In the 3rd, the Under Secretary of State, on the 9th November 1858, answered the Company, by stating—1stly, That Lord Stanley could not dispense with the proposed reference to Madras, upon the ground that the Madras Government had intimated very serious doubts regarding the Toombuddra project, observing that existing Irrigation works were fed by sources

proposed to be diverted for its supply; and remarking that "it must be borne in mind that the "first operations of the Madras Irrigation Company will constitute an experiment, the result "of which, by serving either to encourage or to discourage the further application of British "capital and enterprise to similar undertakings in India, cannot but exercise a very serious "influence on the interests of both countries. It is, therefore, of the highest importance that "nothing should be neglected to secure the experiment from failure." 2ndly. With reference to the limitation of the guarantee to 1,000,000*l.*; that "while Lord Stanley admits that it may "be desirable hereafter to increase the capital to the full amount which the Company are "empowered to raise, he considers it expedient to limit the present expenditure to 1,000,000*l.*, "reserving the question of granting a guarantee upon any further increase until the benefits "resulting from the works have been ascertained." 3rdly. That Lord Stanley declined to accede to the proposed stipulation regarding the surrender of the works by the Company, but was prepared to agree that the Government should be bound, in the event of their desiring to purchase the works at the end of 25 years, to pay to the Company a sum equal to an average of the market price at which the shares had been selling for the three preceding years, and that if within six months after the end of the said twenty-five years the Government should not elect to purchase the works, they would leave the undertaking in the hands of the Company, renewing the then present terms and conditions for a further term of twenty-five years. And 4thly. That Lord Stanley could perceive no reason why all surplus profits, from whatever source derived, should not be equally divided between the Government and the Company.

In the 4th, dated the 15th November 1858, the Secretary of the Company replied, that the Directors accepted the proposed stipulation regarding the purchase of the works by the Government, understanding it to imply a renewal at the expiration of every like term thereafter, subject to a similar right of purchase, and he again submitted arguments in favor of the suggested right of surrender on the part of the Company, also of the claim previously advanced by the Directors to the whole of the profits from navigation, and after soliciting that the Madras Government might be instructed to act with the utmost promptitude in the selection of an experimental work, and that such work should combine navigation with irrigation, requested permission to the Directors to call up a portion of the required Capital in order to enable them to investigate any suggested project and proceed with their operations, stating that they proposed to issue 50,000 shares at £20 each, to require a payment of £1 per share, and to pay such amount, less the preliminary expenses, into the Indian Treasury, upon the understanding that from the date of such payment interest at the guaranteed rate should be paid.

In the 5th, the Under Secretary of State, on the 1st December 1858, answered the Company thus, viz.:—That Lord Stanley did not object to the construction placed by the Directors on the proposed power of purchase to be vested in the Government, and that, admitting the desirableness of the Company having at an early period a limited amount of funds available for preliminary investigations, his Lordship would, on receiving an intimation of the Company's acceptance of the terms offered, not object to their proposed issue of shares and receipt of deposit, and lastly, that Lord Stanley, after due consideration of the arguments advanced on behalf of the Company, saw no reason for further modification of the proposals contained in his previous letters of 30th September and 9th November; and—

In the 6th, dated 6th December 1858, the Secretary of the Company, after justifying the claims previously put forward by the Directors, stated that as the Secretary of State in Council declined to concede them, they (the Directors) accepted the terms offered as the basis of an arrangement with the Company, which terms they understood to be in substance as follows:—

"1. That the operations of the Company shall, in the first instance, be confined to one work, or project, approved by the Local Government, the estimated cost whereof shall be £1,000,000*l.* sterling.

"2. That the Secretary of State for India in Council will guarantee a minimum interest of 5 per cent. per annum on the capital of 1,000,000*l.* as it is paid into the Indian Treasury, which guarantee shall be subject to determination only in the manner next hereinafter described.

"3. That the Secretary of State for India in Council, or other the Government of India for the time being, shall within six months next after the expiration of any twenty-five years from the commencement of this present arrangement, have the option of purchasing the works constructed at a sum equal to an average of the market price at which the shares therein have been selling in London during the three preceding years.

"4. That the various works comprehended in the project selected for the commencement of operations by the Company, shall be constructed conformably to plans approved by the Local Government, and shall be kept in a state of efficiency by the Company.

"5. That it shall be left to the Government to decide in what manner the return from the works constructed shall be levied, and the Government shall have the option of purchasing the water supplied for Irrigation, at a price to be agreed upon with the Company.

"6. That all surplus returns from such works, after the payment of all expenses of maintenance and establishment, and of the Guaranteed minimum interest, shall be divided equally between the Government and the Company.

"7. That all required lands shall be provided by the Government.

"8. That the Secretary of State for India in Council, shall possess the same power of supervision and control over the proceedings, preliminary expenses, and future expenditure of this Company, as he possesses over those of the Guaranteed Indian Railway Companies.

"9. That for the purpose of providing a fund available for employment in preliminary investigations, this Company may forthwith issue 50,000 Shares of 20*l*. each, and require immediate payment of 1*l*. per Share, and that on payment into the Indian Treasury, in England, on or before a day to be named, of the amount so raised, viz.: 50,000*l*. (less the preliminary expenses), the same shall bear Interest at the Guaranteed rate."

And added the following paragraph in conclusion, viz.: "Adopting therefore, this outline "of terms as the foundation of the proposed arrangement, the Directors are prepared without "delay to consider and approve a draft contract founded thereon, and to execute the same in "the usual way when complete."

To this last letter containing, it will be seen, a resumé of the terms agreed upon as the basis of an arrangement, no reply was given, and no objection has ever been made to such resumé, but the same has always been treated by the Government and the Company as correct.

In accepting the terms so arranged, the Directors fully understood and believed, that although the guarantee was said to be limited to a capital of £1,000,000, it was intended by the Secretary of State, that a defined work of the *estimated* cost of £1,000,000 should be carried out and completed; and that as in the case of the Indian Railways, the guarantee was to be subsequently extended to its actual cost. That in truth the experiment whether private enterprise could satisfactorily execute works of irrigation in India was to be fairly tried, which clearly could only be done by the execution of an entire project. This was clearly their interpretation of the arrangement, and such as would at that time have been entertained by the public. The Directors would not have consented to accept a guarantee of a less favorable character, and had it been intimated to them that whatever the cost of the work might be, the guarantee would not be extended beyond £1,000,000, whilst under the powers of supervision and control to be vested in him, the Secretary of State would have the right to alter and add to the work so as to increase its cost almost indefinitely; or that he was to have the power of reducing the scheme so as to keep its cost of construction within the £1,000,000, and thus alter the nature of the work and render the guarantee altogether different to that given to the Railway Companies, they certainly would not have proceeded further with the undertaking.

Relying upon this interpretation of the arrangement entered into, the Directors immediately placed the undertaking before the public and issued the 50,000 shares, for which authority had been given by the Secretary of State in Council; and they subsequently paid the sum of £50,000 into the Indian Treasury.

The Secretary of State in Council likewise immediately acted upon the agreement, by forwarding, on the 12th January 1859, a despatch to the Government of Madras, from which the following is an extract:—

"In the more recent of these communications, grave objections against committing to "private agency the construction of Irrigational works are urged by you, which certainly "possess great force, and which have received the careful attention to which they are "entitled. It was believed, however, that arrangements might be made which would in "a great degree obviate these objections; and it was deemed so important at the present "moment to encourage the introduction into India of British capital and enterprise, that it "was resolved to accept the co-operation of the Madras Irrigation and Canal Company, and "to meet their proposals with the offer of liberal terms.

"At the same time it was felt to be necessary to proceed with great caution. Of the "two projects submitted by the Company that in connection with the Toombuddra appears "the least exceptionable, but neither seems to be regarded by you with much favour, and the "Company were informed that enquiry should be made whether you could name some third "scheme preferable to either. I would now, therefore, request you to select from the various "Irrigational projects which have from time to time been, or may be, brought to your notice, "some one or more which, while it may be executed at a cost not exceeding £1,000,000 "sterling (the pecuniary limit within which it is intended to restrict the first experimental "operations) may in your judgment, be least liable to failure from Engineering difficulties, "and may hold out the fairest promise of remunerative returns. It is desirable that if possi-"ble, the project should be adapted to purposes of Navigation, as well as of Irrigation."

And on the 30th April 1859, the Under Secretary of State wrote thus to the Company:—

"Lord Stanley thinks it desirable that in future Sir James Melvill should take a seat "at the Board of the Company, in the capacity of ex-officio Director, in accordance with "the understanding between the Company and this Department, and he has given him the "necessary instructions for attending the Meetings of the Directors accordingly."

From the date of this letter to the present time, Sir James C. Melvill has attended all Board Meetings of the Company as ex-officio Director, and the proceedings of the Company have been assimilated to those of the Indian Guaranteed Railway Companies.

Under the authority of the Despatch from which a quotation has just been made, the Government of Madras remitted the matter to Colonel Arthur Cotton, then acting as their Commandant of Engineers, with a request that he would state to them what project, not excluding those submitted by the Company, he would recommend as the best suited to the object in view.

On the 5th of February 1859, permission was requested from the Secretary of State for the Company to receive from their Shareholders the remaining sum of £19 per share in advance of calls, upon the understanding that interest at the guaranteed rate should be paid thereon, from the dates of payment into the Indian Treasury. This proposal was at once acceded to, and at this moment a sum of £500,000 has been voluntarily paid in anticipation of calls, which, added to the £50,000 previously deposited, makes up a total of £550,000 now in the hands of the Secretary of State (minus the expenses disbursed) on account of the guaranteed capital of £1,000,000. It is essential that this permission to receive the whole of the capital, and to pay the same into the Indian Treasury, should be borne in mind hereafter, when reference is made to the present state of affairs because such permission is still in force, and the whole of the remaining £450,000, making up the complete £1,000,000, may, at any moment, be paid into the Indian Treasury, if the Shareholders so will it.

In the same month of February 1859, the Directors having first obtained the sanction of the Secretary of State, appointed Colonel Hugh Calveley Cotton, then in Tasmania, to be their Chief Resident Engineer in India, and they also requested permission to elect and send out several Assistant Engineers, but this was refused as being premature.

The Madras Government having arrived at a decision with reference to the project to be entrusted to the Company, the following letter was addressed by the Assistant Under Secretary of State for India to the Secretary of the Company, viz.:—

"India Office,
26*th August* 1859.

"Sir,

"I am directed by the Secretary of State for India in Council to inform you that a reply "has been received to the Despatch, dated 12th January, in which the Government of Madras "were requested to select one of the Irrigational schemes before them, with a view to its "execution by the Madras Irrigation and Canal Company, *and that the one chosen by them* "*is that known as the Toombuddra project.*

"I am to add that free access will be afforded to you at this Office to the letter from "the Madras Government to the Directors therein alluded to.

"The Secretary of State in Council wishes to receive from the Company as soon as pos-"sible their views as to the adoption of this scheme, and steps will then be taken to settle "the contract.

"I am
"Sir,
"Your most obedient humble Servant,
"J. C. MELVILL."

"J. Westwood, Esq."

With reference to the concluding expression of this letter, it is necessary to state that applications had been made at the Office of the Secretary of State for a draft of the intended contract, but this had been postponed from time to time, upon the ground that it was impossible such deed could be drawn until particulars had been received from the Madras Government of the specific project to be undertaken by the Company.

To the letter last set out, the following reply was forwarded by the Secretary of the Company, viz.:—

"Madras Irrigation and Canal Company.
"27 Cannon Street, E.C.,
"29th August 1859.

Sir,

"With reference to the last paragraph of your letter to me of the 26th instant, I have "the honor to state, that the scheme therein referred to having been selected by the Directors "of this Company, and submitted to Government in their letter, under date 6th June 1857, "as one of the works to be executed by them, they are much gratified to learn that it has "now received the sanction and approval of the Secretary of State for India in Council. "They are prepared to enter upon its detailed survey with a view to its construction with-"out delay.

"The Directors are also most anxious that no time should be lost in the final settle-"ment of the Contract Deed mentioned by you, and they therefore earnestly hope that the "Draft thereof will be forthwith forwarded to them for approval.

"I have to acknowledge your kind offer of free access to the letter received from the "Madras Government, and the Documents therein alluded to, but considering the highly "important nature of their contents, and their intimate bearing upon the working of this "Company, the Directors desire me to express their hope that the Secretary of State for "India in Council, will favour them with copies thereof, which, if required, shall be returned.

"I have the honor to be,
"Sir,
"Your most obedient, humble servant,
"JOHN WESTWOOD,
Secretary.

"J. C. Melvill, Esq."

The request contained in the last paragraph of this letter was acceded to by the Secretary of State, who forwarded to the Company printed copies of the letter received from the Madras

Government and the Report made by Colonel A. Cotton, the whole being endorsed thus: "Papers regarding the project that should be undertaken by the Madras Irrigation Company."

It will be sufficient here to state, with reference to these documents, that Colonel Arthur Cotton, after close consideration, strongly recommended the Toombuddra project as the most eligible for the Company's operations, and the Madras Government entirely agreed with him. But it must at the same time be remarked, that the scheme thus recommended, or at least, dealt with by the former, was considerably more extensive than that alluded to in the sketch previously submitted by the Company, and designated the "Toombuddra Project," which was composed (as shown on the map) of a series of works, extending eastward from the junction of the Wurdah and Toombuddra rivers, but as the works added, consisting, 1stly,* of a navigable canal, taking its course, from the Wurdah to the Western Coast; and 2ndly, of works for rendering the rivers Kistnah, Bemar, &c., navigable, in order to open up communication from Poonah to Kurnool—were distinct from and in no way interfered with the carrying out of the original project, nor necessary for its development, they may be dismissed from further consideration. The estimate of the whole extended work, by Col. Arthur Cotton, was £2,000,000, and deducting the estimated cost of the added works, there remained £1,300,000 for the original Toombuddra project; but he added, "I have no doubt that £1,000,000 sterling will complete a noble under-"taking, accomplishing all the main objects to the eastward of the Toombuddra."

In recommending the Toombuddra project the Local Government were of opinion that it should be undertaken in sections, that is to say, that as soon as the necessary plans, surveys, and estimates were ready for one section it should be forthwith commenced, and that the detailed investigation of the next section should then begin; and they made the following observations, which are useful, as showing to some extent the interpretation which they put upon the stated limitation of guarantee.

"Having named the project for the Company's operations we shall now advert to paragraphs 4 to 6 of the Despatch, wherein is enjoined the preparation of the necessaay surveys and investigations in view to an approximate estimate being framed, and where also it is intimated that the works comprehended in the project are to be constructed according to plans approved by us. In these remarks your Lordship assumes that the surveys and investigations will be made by Officers of this Government; but we would reply, first, that we have not the Officers to spare for this duty; and second, that it is necessary that the preparation of the detailed estimates should be left entirely to the servants of the Company. However minute the surveys and estimates with which we might supply them, those gentlemen would still be bound to make surveys and estimates for themselves; the work would thus have to be done twice, at a useless waste of time and money. The general information before us, derived from the investigations of various officers, is quite sufficient to enable us to arrive at a decision, and to show that the first portion of the scheme recommended is quite practicable, that it presents no material Engineering difficulties, that *it is not likely materially to exceed the fixed limit of cost,* and that it holds out very encouraging prospects of a pecuniary return, while in respect of public benefit it is second to none in the country. We submit that this is quite sufficient for present purposes. We see no necessity for, or advantage in, waiting for detailed surveys and estimates. On the contrary, we think that the needless delay so caused would be a great evil. We are, therefore, of opinion that the Company should be at once authorized to send out their Officers to this country, and to take measures for commencing operations as soon as possible.

"It is necessary that we should have an Officer in the same position, as respects this Company, that the Consulting Engineer holds in respect of Railways, and we propose, with your Lordship's approval, to appoint an Engineer Officer who has had extensive experience in navigation and irrigation works, to act as the Government Consulting Engineer for the Irrigation and Navigation Company. The experiment is of such vital importance to the future prosperity of India, that it will be well worth while to take our best qualified officer, and employ him entirely upon it. Although he will not himself make the surveys,

* See the accompanying Map.

or frame the plans, he will be cognizant of everything that is done from the commencement, he will freely give his advice and assistance, and will see that there is no undue interference with the rights either of the Government or the landed proprietors."

The Directors conceived that when they accepted the project proffered to them by the Secretary of State, that the spirit, if not the legal interpretation, of the first condition of the arrangement they had entered into, had been completely satisfied, inasmuch as a project, the cost of which, after investigation, had been estimated by the most able Officers of the Government at from £835,000 to £1,250,000, whilst the Commandant of Engineers, the highest authority available, was of opinion, that the main objects contemplated could be carried out for £1,000,000, had been selected and approved by the Local Government, then proffered to the Company by the Supreme authority in England, and accepted by the latter as *the work* to be undertaken by them; indeed, it is clear that all parties at the time looked upon and dealt with the work as the specific project to be first constructed by the Company. That this was the view of the Secretary of State is evident from the fact, that, in a Despatch which he addressed to the Madras Government, on the 15th of September, 1859, the following statement occurs:—

"I have to inform you that the Madras Irrigation and Canal Company have agreed to the scheme proposed by Colonel Cotton.

"The Company have appointed Major Hugh Calveley Cotton, their Chief Engineer, at a salary of 1,250 Rupees per mensem, to commence from the date of his embarkation at Tasmania for Madras, the expense of his voyage to be paid by the Company.

"You will give Major Cotton free access to all documents which are in your possession, and which are likely to be of use to him in connection with the *Toombuddra project*.

"I enclose for your information copy of the instructions which have been sent to Major Cotton by this mail. The Company have not yet appointed an Agent, and at their request and in order that no time may be lost in the execution of the surveys by Major Cotton, you are authorized to advance to him from time to time such sums as he may require and you may think reasonable, charging the same against the Company, Major Cotton rendering to you full account with vouchers of sums expended, which are to be examined and passed, if found correct, Major Cotton being personally responsible for any irregularities.

"You will consider, in communication with Major Cotton, the best method of transacting the business of the Company at Madras, both with regard to the approval by Government of the plans and the check upon expenditure during the progress of the works, and transmit to me the scheme which you consider will be best calculated to ensure a proper supervision in all departments without involving unnecessary delay.

"You are authorized to appoint an Engineer Officer* to act as Consulting Engineer to the Government as regards the Company as soon as his services are required, but I should hardly think that it would be necessary to make the appointment at once, for there must be much preliminary work to be done by the Officers of the Company before any part of the scheme can be presented to Government for approval.

"A copy of the contract with the Company will be forwarded to you as soon as it has been settled.

"It is of considerable importance that an accurate account should be kept of the total cost of the works performed by the Company, and there are many items, such as the salary of the Consulting Engineer, and the value of the land which will be supplied to the Company free of charge, &c., which although not paid by the Company will form part of the real cost of their works, you should therefore keep an accurate account of all expenditure in your Presidency, of whatever kind, which should properly be charged against the works.

"Such an account will be most useful for future calculation.

"I observe that Colonel A. Cotton, in the 6th paragraph of his report, mentions that he considers that a river communication may be opened from Poonah or Ahmednuggur to Kurnool at the cost of Rupees 1,000 per mile. This would be a most useful undertaking,

* This appointment was subsequently made, Captain Rundall being the officer selected on account of his great experience in works of Irrigation.

more especially when the Canal is made joining the Kistnah and Pennair rivers. I should be glad if you would direct a more complete survey to be made of the rivers above Kurnool and report the results.

"In the meantime this work should not be included in the Company's scheme, as it appears to me to be one which can be more advantageously carried out by Government.

"With respect to the more general questions which are discussed in your letter under reply, I have to observe that it is of great importance that the operations of the Company should succeed, not only as regards the effect upon the Indian revenues, but because a successful result might induce capitalists both here and in India to invest money, either in similar undertakings or in loans to be raised locally for irrigation purposes, as suggested by Sir Bartle Frere. I feel confident, therefore, you will afford to the Company your hearty co-operation and support.

"I shall be glad to receive your further report upon the manner in which the returns shall be levied when the Company's works are completed."

It is worthy of remark that in this Despatch the Secretary of State directed that the opening up of the river communication from Poonah to Kurnool—being one of the additions to the Toombuddra project, advocated by Colonel A. Cotton, as before-mentioned, but which in reality formed a distinct work in itself, though accessory to the other—should not be included in the Company's scheme, as it appeared to him a proper work for the Government itself to undertake.

Accompanying and referred to in this Despatch were instructions drawn up by the Company, and which had been submitted to and approved by the Secretary of State. They directed the Chief Engineer of the Company to investigate and plan more in detail than had before been done, the Toombuddra project, as offered to and adopted by the Company, and to prepare detailed estimates and working drawings of that section thereof which, in his judgment, would be the most eligible to construct first; and they directed that Officer to prepare and submit to the Local Government a report of the scheme so planned, and of the outlay which it might safely be relied upon would not be exceeded, calculating the same with as much accuracy as the materials he could procure would admit of, though without detailed estimates and plans, and "taking "care to limit the scheme to a series of works which may be rendered complete at a cost, "including a fair allowance for contingencies, and the establishments here and in India, of "1,000,000*l.* sterling." The words between inverted commas having been inserted by the Under Secretary of State.

At this time it was assumed that the words just referred to, were inserted in order to induce the Chief Engineer so to plan the work that its cost might be kept as nearly as possible within the specified amount, inasmuch as it had been stated by Colonel A. Cotton, acting for the Government, that the main objects of the scheme could be carried out for that sum; it certainly never occurred to the Directors that they were intended to cause the project to be lessened by mutilation, if it should appear that it would cost somewhat over the million to carry it out in its integrity, and its value thus lessened.

Simultaneously with the latest of the proceedings just narrated, the Company, acting upon the assumption and belief, that an entire project had been proffered to, and accepted by them, forwarded through their Secretary the following letter to the Under Secretary of State, viz:

"THE MADRAS IRRIGATION AND CANAL COMPANY,"
"27, Cannon Street West, London, E. C.,
3rd September 1859.

"SIR,

"The scheme submitted by this Company for utilizing the waters of the rivers Toom-"buddra, Kistnah, and Pennaar, and known as the Toombuddra project, having received "the approval of Government as the most eligible work for the commencement of their "operations, the Directors are about to forward to Major Hugh C. Cotton, their Chief "Engineer in Madras, instructions requesting him to enter upon and prosecute without loss "of time, such investigation and survey as will enable him to complete at the earliest possi-

"ble period a general plan and estimate thereof, and also to prepare all necessary working "plans, and detailed estimates for submission to the Madras Government.

"In order to enable Major Cotton to carry out these instructions with promptitude "and efficiency, it is absolutely necessary that in addition to such subordinate aid as he "will be able to procure locally, he should at the outset be supplied from England with "the services of four thoroughly efficient, and four Assistant Civil Engineers.

"The Directors, therefore, propose at once to make the necessary selections and "engagements, and to fix the salary to be paid in each case, as moderately as possible, in "accordance with professional skill and attainments, between a minimum of £400 per "annum, and a maximum of £850 per annum, and they earnestly hope that the Secretary "of State for India will sanction this course.

"I have the honor to be,

"Your most obedient, humble servant,

"J. WESTWOOD,

"Secretary."

"JAMES COSMO MELVILL, ESQ.,

"Assistant Under Secretary of State for India."

This proposal was acceded to by the Secretary of State, who, in the letter notifying his approval, recited the fact that such executive Engineers "were to proceed to Madras, for the purpose of assisting Major Cotton in such investigation and survey as will enable him to complete at the earliest possible period the general plan and estimate of the scheme submitted by the Madras Irrigation and Canal Company, and known as the Toombuddra project," and accordingly the executive officers in question were engaged and dispatched to Madras, and subsequently distributed over the whole project.

The Chief Resident Engineer arrived in Madras, prior to the settlement by the Local Government of the project to be carried out by the Company, and, therefore, before he was placed in possession of the instructions directing him to make a general survey and estimate of that work, and detailed estimates of the section to be first constructed, but knowing the selection and the recommendation made, he entered upon an examination of the reports made and the levels taken by the Officers of the Government, and decided in anticipation that the section best adapted for the commencement of operations was that which would commence at Kurnool and terminate at the coast, and known as the "Kurnool section," and after a personal inspection of that locality, drew up two reports, stating the result of these preliminary and anticipatory movements.

It is not necessary to refer further to these documents, beyond stating that they clearly treated the section thus selected for first construction, as a portion of the larger and entire work, and not as a work complete in itself, without the remaining sections.

It should have been earlier stated that Colonel Arthur Cotton, the Government Commandant of Engineers, in his Report approving of the Toombuddra project, suggested that two works, one consisting of the Mauri Tank, situated in the province of Mysore, (a Native State under the control of the Supreme Government at Calcutta), with the channels therefrom in the Madras Presidency; and the other a small canal from the termination of the Toombuddra project at Kistnapatam, to Dooragapatam on the East Coast,† requisite to form a continued communication from the Company's works to Madras, should be entrusted to the Madras Irrigation and Canal Company. Neither of these works was directly alluded to in the first instructions forwarded to the Company's Chief Resident Engineer, but the Directors being convinced, after full consideration, that it was most desirable to include them in the Company's project, drew out further instructions for that officer, in which they expressed themselves thus, viz: —

"The Board consider it most desirable that in determining the nature and extent of "their intended works, you should deal with the whole scheme as sketched out in their "letter of the 6th June 1857, previously sent to you, and further explained in the Report "of Colonel A. Cotton, of 18th May last to the Madras Government, and this irrespective "of any proposed completion by the Government, of the communication between Nellore

† These two works are shewn in the accompanying map.

"and Madaas; in other words, they desire that direct communication with Madras should "be considered by you in accordance with the views expressed by Colonel A. Cotton, in "the Report just mentioned by this Company, the more especially as they believe this will "be in accordance with the wishes of Government.

"Upon this point it is necessary to call your attention to the 10th paragraph of previous "instructions, and to suggest that it may be advisable you should not only consider and "report upon the expediency of making use of the Pennair river as a main water "channel, or, as recommended by Captain Collyer, of constructing a canal through the "Nellore District, using the Pennair as a source of supply only; but that you shall, on "determining the course of such canal, (if you should decide thereon), ascertain whether it "will not be advisable to carry it from the Pennair in a south-easterly direction to that "part of the Pulicat Lake from whence its navigation to Madras is free from obstruction, "viz., near the Shooloorpett; but in this you will, of course, be guided by the character of "the district which would be thus traversed, and whether it contains a large area of good "land requiring irrigation, and therefore likely to prove remunerative.

"You will also consider yourself at liberty, in prosecuting your survey and framing "your report, *to treat the Maury Tank as belonging to, and forming part of the scheme to be "constructed by this Company, if you deem it advisable to do so.*

"The Directors cannot impress upon you too forcibly the high importance of selecting for first construction, that section of the scheme which will certainly render the most "prompt and satisfactory returns upon the capital expended thereon, and that, if necessary, "the more regular order of construction may in this respect be very properly passed over, "in order to secure these advantages.

"It is proper that I should state, for your guidance, that no portion of the Capital "now authorized to be raised can be applied to the construction or providing of vessels of "any kind for navigating the Rivers opened or the Canals constructed. All monies required "for this purpose will have to be raised separately; and in order that the Board may pro-"perly decide upon the expediency of adopting the business of carriers on the water com-"munication created by their works, it is most desirable that every information should be "procured by you, not only regarding the required amount of expenditure for Boats, &c., "but as to the best kind of Vessel to be employed, together with every other particular "connected therewith, as also the times at which the several portions of such water com-"munication will be in a state of completion sufficient to warrant the introduction of such "Vessels thereon. This matter had better form the subject of a separate Report from you, "although it will necessarily be taken into consideration to some extent by you in planning "the intended works and in selecting the first section thereof."

The latter paragraph, referring especially to navigation, is necessary to be borne in mind hereafter, as shewing that the Directors understood that for the navigation of their water-ways additional capital would be required.

These instructions were laid before the Secretary of State, together with copies of the two Reports of the Chief Engineer for his approval, which approval was signified in a letter to be given, subject to such instructions being first submitted to the Madras Government.

It will be remembered that in the letter of the 26th August, 1859, received from the Under Secretary of State, the draft of the formal contract was promised to be forwarded to the Directors, but nothing further upon the subject was heard until the 5th January 1860, when the Solicitor acting for the Government forwarded to the Solicitor of the Company a form of draft contract with the following letter:—

"Drapers' Hall, 28, Austin Friars, E. C.,
"London, 5th January, 1860.

"*Madras Irrigation Company.*

"DEAR SIR,—I send you for perusal the accompanying draft contract which the Secretary of State in Council has it in contemplation to offer to your clients, but it has not yet been fully assented to at the Madras Office, and you will, therefore, be good enough to bear in mind that it

may yet be subjected to alteration at the India Office. I think, however, you had better now peruse it *valeat quantum.*

"You will find that its terms differ in several respects from those originally proposed to the Company, and are, as I think you will agree, more favourable to them.

"I shall feel obliged by your early return of the draft, and should any points appear to you to require explanation I am desired to suggest that it will probably facilitate an early settlement of the matter if Mr. Westwood would meet Mr. Thornton, the Secretary in charge of the Public Works Department, at the India Office, upon the subject.

"I am, Dear Sir, yours faithfully,
"H. S. LAWFORD.

"J. MACKRELL, ESQ."

Upon a perusal of this draft, it appeared to be so seriously objectionable and so contrary to the terms of the existing arrangement, as to render it impossible of acceptation by the Company; for example, whilst it expressly limited the guarantee to 1,000,000*l.*, it gave to the Secretary of State power to select a project the *estimated* cost of which should not exceed 1,000,000*l.*, and compelled the Company to complete that work whatever its actual cost might be, as also to carry out such alterations in, or additions thereto, as he might require. It also bound the Company to provide, to the satisfaction of the Secretary of State, proper and sufficient machinery, conveniences, barges, boats, and other vessels, both for the supply of water for irrigation and for carrying on the business and traffic of the canals, and made it incumbent upon them to supply the irrigation in such manner and with such accommodations, and under such limitations, as the Secretary of State should from time to time require; and to conduct the navigation upon the same terms, charging only such rates and fares as he might determine; and it positively gave to the Secretary of State power to reduce the rates, fares, and tolls, at all times, so as to limit the Company's net profits to 12 per cent.

Discussions were had upon this draft, and representations made to the Under Secretary of State, which resulted in the transmission by him on the 8th March 1860, to the Secretary of the Company of a second draft of the contemplated contract, accompanied by the following letter:—

"India Office,
8th March 1860.

SIR,

"I beg to transmit herewith for submission to the Directors of the Madras Irrigation and "Canal Company, and for any observations they may have to make upon it, twelve printed copies "of a draft deed of Contract, defining the reciprocal engagements of the Secretary of State for "India in Council on the one part, and the Company on the other *founded on the correspondence* "*which has taken place between them.*

"I am, Sir, Your obedient Servant,
"T. G. BARING.

"J. WESTWOOD, ESQ."

Before proceeding to describe the effect of this draft Contract (No. 2) it is necessary to state that, in the early part of the February preceding, the Directors received information from Madras, to the effect that, in consequence of the rainfall in the districts of Bellary and Kurnool having been considerably less than had been known for many years before, a famine was impending; and that the Governor of Madras (Sir C. Trevelyan) had strongly urged upon their Manager that the construction of portions of the Toombuddra project should be at once entered upon, because thereby employment would be provided to large numbers of the native population, and the severity of the threatened evil considerably mitigated; but that both their Manager and Chief Engineer had been prevented from acceding to this request by the stringency of their previous instructions, which limited their operations to the prosecution of a general survey, the preparation of a general plan and estimate of the entire work, and the preparation of working plans and estimates of that section which, in the Chief Engineer's opinion, would be the most eligible for first construction. Believing that it would be to the interests of the Company, as well as to the benefit of the country, that the construction of those parts of the work, which under any circumstances would have to be made, should be at once entered upon, especially as

labour would, under the then existing circumstances, in all probability be abundant; and anxious also to fall in with the views of the Local Government, as far as possible, the Directors forwarded, on the 24th of February 1860, to the Secretary of State in Council, for approval, the following letter of instructions to their Agent and Manager, viz.:—

"The Madras Irrigation and Canal Company,
"27, Cannon Street, E. C.,
"London, 24th February 1860.

"SIR,

"The Directors having, by the mail which arrived in England on the 21st instant, "received intelligence of the painful fact that the inhabitants of the districts of Bellary and "Kurnool are in a state of great distress, consequent upon the late failure of rain there, and "believing that the construction of portions of their Toombuddra project may be entered upon "with advantage to the Company, and thereby considerable relief afforded by the employment "of many of the native population, they hereby modify their instructions previously sent to "you and the Chief Resident Engineer, to the following extent:—You will represent to the "Government of Madras the advantages to be expected from entering forthwith on the "construction of the intended works the Chief Resident Engineer, in his report of the 20th "September last, recommended for first operations, viz., 'the diversion of the waters of the "Toombuddra into the Pennair, and the supply of water for Irrigating land throughout the "Koondaur valley,' and also upon the construction of such other portions of the entire project "as may appear, after full consideration, to be certainly necessary, and be carried out without "prejudicing the consideration and possible alteration of the scheme in other respects. In "the event of the Government signifying its assent to this course of proceeding, you will give "instructions to the Chief Resident Engineer for its immediate adoption.

"JOHN WESTWOOD,
"Secretary.

"F. A. AGNEW, Esq."

So readily and fully did the Secretary State and Council of India concur in the advantages to be derived from these instructions, and so properly eager were they that those instructions should be remitted to India at the earliest possible moment, that on the following day (the 25th February 1860,) they were returned, with a letter approving them. These instructions were transmitted by the mail which left England on the next day, viz., the 26th February 1860.

A few days prior to this last date a Report containing a general plan of the entire Toombuddra project, including the Mauri Tank and connecting channel, together with a rough estimate of the cost, viz., £1,350,000, was received by the Directors from their chief Resident Engineer, the same having been previously laid before the Madras Government and, it is assumed, transmitted by them to the Home Government, so that long before the receipt of the instructions to commence actual work at several points, the Madras Government at least were thoroughly aware, after an investigation made by the Company, that the entire project would cost more than £1,000,000, and it may be added, as their subsequent proceedings prove, were desirous that the Company should nevertheless execute it.

It will be necessary to refer to this Report more fully presently, that is, after a recital of the proceedings which in England followed the receipt by the Company of the 2nd Draft Contract, which, for the sake of dates, must now be given.

Although in form this Draft (No. 2) approached much nearer to a correct interpretation of the existing arrangement than its predecessor, it still fell very far short of carrying that arrangement out fairly and equitably. It embodied in effect all of any importance, except two, of the clauses contained in the Contracts made between the Government and the Indian Guaranteed Railway Companies—the two excepted clauses being:—1. That conferring upon the Railway Company a right to surrender the Railway and works and to receive back its expended capital, and privilege was denied to the Madras Irrigation and Canal Company: and 2. The clause which authorizing the Railway Company to raise additional capital, if such should be required to complete the work entered upon, and extending the guarantee, so as to cover such additional capital. Therefore it gave to the Government all the advantages to be derived from treating the Irrigation

Company as standing in the same position as the Railway Companies, but deprived that Company of the *one* condition belonging to that system which would operate in their favour.

The operation of this 2nd draft Contract, as thus drawn up, would have been as follows, viz.:—

The Secretary of State would have been entitled to fix upon and select a plan or plans of a work of the *estimated* value of £1,000,000; to alter such plans by extension or limitation, even after the commencement of work, and the Company would have been bound to *complete* such work in accordance with such original or altered plans, together with such buildings, offices, warehouses, machinery, conveniences, &c., as the Secretary of State should require; and upon the completion of such work, they would also have been bound to provide, to the satisfaction of the Secretary of State, proper and sufficient machinery, conveniences, barges, boats, and other vessels for supplying irrigation, and for carrying on navigation and then to supply the water for irrigation, to such persons as the Secretary of State might authorise in writing to demand it, at a price to be agreed upon, but in case of difference, to be fixed by the Secretary of State himself; and also to conduct navigation entirely as he should direct, both as to the number and rate of speed of the boats and otherwise; and likewise to carry the Mail-bags, Post office servants, &c., gratis, and all Military Officers, and Stores, at such fares, &c., as might finally be determined by the Secretary of State.

The Guarantee of Interest given by the Secretary of State in Council would have extended to the first Capital of 1,000,000*l.* only, whatever the outlay might have been, whilst he would be entitled to one-half of the profits arising from the expenditure of the Guaranteed Million, "*after the payment of 5l. per cent. to the Shareholders to cover the Guaranteed Interest,* and to one clear half of the profits arising from the expenditure beyond this 1,000,000*l. without any deduction whatever,*" so that the Company,—to complete the work, to carry out the additions, and to provide boats and other conveniences for the Navigation of the Canals, would have had to raise additional Capital without a Guarantee, and the Secretary of State would have been entitled to one moiety of the profits arising from the expenditure of such unguaranteed capital, and it should be added if the Company had failed in raising such Capital the whole of the works would have reverted to the Government who would have been liable only to repay the expenditure sanctioned by them.

The Directors of the Company believing that they would not be justified in agreeing to and executing a deed so manifestly contrary to the existing agreement, but desiring only that which was fair and equitable, they laid the Draft before Mr. Lloyd, as Counsel for the Company, with instructions to peruse and settle the same in accordance with the correspondence, and with reference to such points as were not so provided for, as he might consider fair and equitable between the parties, and accordingly Mr. Lloyd, under these instructions, settled the Draft on behalf of the Company.

The main alterations thus made by the Company's Counsel, may be shortly stated, as follows, viz.:—

1st. The introduction of recitals to the effect. That it was, amongst other of the terms, agreed that the operations of the Company should in the first instance be confined to one work or project to be approved by the Government of Madras, the estimated cost whereof should be £1,000,000. That the Company proposed as the most eligible for the commencement of their operations, the work known as the Toombuddra project, which had been approved by the Madras Government, as the Secretary of State did thereby admit; and that the Company had entered upon the survey of the said works, the preparation of detailed estimate thereof, and with the consent of the Secretary of State in Council, had commenced the construction of certain portions thereof.

2nd. The rejection of the clause which stipulated that the Secretary of State should select the work, plans, &c., a provision that the Company should construct the Toombuddra project in accordance with plans and estimates to be approved by the Government, being substituted; at the same time all the powers of alteration and addition, &c., set out in the original draft as being vested in the Secretary of State, being retained.

3rd. The condition compelling the Company to carry on navigation was erased, and it was made optional with them to do so or not.

4th. A clause similar to that contained in the Railway Contracts, extending the guarantee to any additional capital required to complete the project, and carry out the purposes of the contract, was inserted ; and

5th. The usual arbitration clause was introduced.

Beyond these alterations, there were others important upon matters of detail, but not necessary to be referred to here.

The draft so altered was returned to the Secretary of State, on the 14th May 1860, with the following letter from the Secretary of the Company :—

"THE MADRAS IRRIGATION AND CANAL COMPANY,
"27 Cannon Street, E. C.,
"14th May 1860.

"SIR,

"I have the honor to forward for the consideration of the Secretary of State in Council "the accompanying copy of the proposed draft Contract with the Company received from you, "with such alterations only made therein (in red ink) as the Directors and their legal advisers "after full consideration believe to be absolutely necessary to make it accord with the existing "Agreement contained in previous correspondence, at the same time meeting wherever possible "the views of Government.

"The Directors are prepared to execute at once, a Deed in the form here presented.

"I have the honor to be, Sir,
"Your most obedient Servant,
"JOHN WESTWOOD,
Secretary.

"The Under Secretary of State for India."

The further history of this draft contract must be dismissed for the moment, that the state of affairs in Madras may be resumed in order of date.

The report of the Chief Engineer upon the whole Toombuddra project, before adverted to, was, on the 9th March 1860, submitted to the Madras Government by their Consulting Engineer, accompanied by a letter by him containing his observations thereon. Both of these documents are important, and it will, therefore, be necessary to state their leading points somewhat in detail.

In his report the Chief Engineer stated that he had examined the proposed scheme *as a whole*, and had made an approximate estimate of its cost and its character, and the result which might be expected from it. He described the work as divisible into four sections, each complete, as it were, in itself, but forming a part of the general whole, and receiving increased importance from such union. These sections he designated as—

1. The Maury Tank section, which he estimated would cost... ...		£226,000
2. The Upper Bellary section,	do.	£415,250
3. The Lower Bellary section,	do.	£288,950
4. The Kurnool section,	do.	£415,250
Making the total estimated cost for the whole project... ...		£1,345,450

He stated, however, that such estimate included 390,000*l.* as the cost of the distribution of the water over the whole area of land (1,300,000) acres as fit for irrigation (*i. e.*, the construction of minor channels and water courses for spreading the water over the entire tract of country commanded by the main channels), but which would only be required to be expended in the course of a series of years, and not until large returns were realized from the first part of the works, and he added the following statement with reference to the excess over 1,000,000*l.*, viz. :—

"The 345,000*l.*, therefore, may in a great measure be considered an item to be required "*after the main works are in full operation,* and large returns have been realized."

"To withdraw from the estimate any one section of the project, in order to bring it down "to its limited amount, would be not only to abandon a great reproductive work, but to reduce "the proportionate effect of the whole, and to withdraw a large proportion of the cost of distri-"bution would withdraw from the estimate its due proportions, and might tend to mislead—I "would rather, therefore, present the estimate as it stands, leaving the reduction of the sum total "to a more mature consideration, when the accurate estimates, which I shall now proceed with, "afford me more certain means of doing it in the best way."

Lastly, he estimated that the Company's portion of the returns to be derived from the whole project, as sketched by him, would represent 34½ per cent. upon the outlay of £1,345,450.

The Consulting Engineer of Government, after discussion with the Chief Engineer, and after full deliberation, coincided with and supported the views thus expressed by the former giving it as his opinion that the estimate was ample, and if anything erred on the safe side, and he strongly and in forcible language, urged the impropriety of reducing the complete project.

It will be observed that the Maury Tank and Channel formed a portion of the project thus dealt with, and that the estimate of the Chief Engineer agreed with those previously given by Colonel A. Cotton, Colonel Faber, (Chief Engineer of Government), Captain Collyer and Lieut. Stuart, and supported by Colonel Lawford.

Upon the two documents now under consideration, the Government of Madras on the 4th of April, passed the following order:—"These papers will be transmitted to the Secretary of "State. The Government concur generally in the views expressed by Captain Rundall respect-"ing the works proposed to be undertaken by the Company, and approve the scheme as laid "down in the Chief Engineer's report, reserving their decision, however, for the present, whe-"ther the Maury Tank should be included in their works or not.

On the same day (4th April 1860), the Government also took into consideration the contents of a Report made by their Consulting Engineer on the 1st February preceding, after he had investigated the proposed scheme, and personally traversed the country it would affect, and in which he gave more in detail the reasons for retaining the project intact, and they recorded an order, from which the following is an extract:—

"The Government have read this Report with much interest. They now resolve to "forward it for the information of the Home Government, as containing a clear outline of "the several parts of the works which the Irrigation Company are about to undertake.— "The Report being general, there are not many points requiring any order here; but the "Government will notice such as there are.

"With the information now before them, the Government are not prepared to give a "decided opinion as to allowing the Company to undertake the construction of the Maury "Tank; but they resolve to refer the question for the early report of the Chief Engineer "whether that tank properly forms a part of the system of works about to be undertaken "by the Company. Should it ultimately appear that that work properly forms a portion "of their general plan, the Government will then strongly recommend that it should be "made over to them, and also that they should be permitted to increase the amount of their "guaranteed capital, to the extent sufficient to enable them to undertake it. *All the other "parts of the scheme of works sketched out in this report seem strictly connected as members "of a general whole,* so that no portion could be properly omitted!"

Immediately after the date of this order, the Letter of Instructions despatched from England on the 26th February 1860, authorizing the commencement of the construction of portions of the works, arrived in Madras, and was, on the 13th April 1860, taken into consideration, and the following order passed thereon by the Government, viz.—

"The Consulting Engineer lays before Government a letter from the Agent of the "Irrigation Company, enclosing one from their Secretary in England, which last gives "authority, in consideration of agricultural distress prevailing in Bellary and Kurnool, for "the immediate commencement, without the previous transmission of detailed plans and "estimates, of that part of the general project of the Toombuddra works which is intended

"to turn water from that river into the the Kundár, and also of such other works, in othe
"parts of the general scheme, as may be determined to be certainly necessary. Captain "Rundall represents (paragraph 3) the advantage of a prompt commencement on professional grounds, and specifies (paragraph 6) that work which he considers should be first "undertaken.

"2. The Government have not yet received the plans or estimates for any part of "the works, but Captain Rundall states (paragraph 3) that those for the anicut at Kurnool, "and the head works of the channels, are in his office, and to be submitted shortly. The "Government therefore sanction the immediate commencement of the headworks of the "channels, and the collection of the materials for the anicut, which latter is not to be built "till after the next monsoon.

"3. The Government also sanction the immediate commencement of the cutting "through the water-shed between the Kundár and the Boanassie, and generally of the "canal from the anicut, provided Captain Rundall has fully satisfied himself as to the pro-"posed line.

"4. The plans and estimates for all these works should be laid before Government "for final approval and sanction as soon as possible.

"5. The Government are not at present prepared to sanction the other works "enumerated by the Consulting Engineer in paragraph 6. They have not received any but "the most general information respecting either the storage of the water of the Hindri, or "the canal from the Pennair at the gorge to Kistnapatam, no more, in fact, than an "intimation that such works are practicable and expedient. The last item, viz., 'such "portions of the canal to Bellary, for which surveys and estimates can possibly be sub-"mitted,' is far too vague. The works abovementioned will employ a large number of "laborers; they are very conveniently situated for the western part of Kurnool, and the "eastern part of Bellary, where distress prevails, and are not so far from the neighbour-"hood of Bellary station, but that persons really in want of work can resort to them.

"6. As the Kurnool works are now to be commenced the Government will make "immediate arrangements for making over the land required to the Company's Engi-"neer, so soon as it shall have been determined and staked out. Captain Rundall will "take measures to have the staking out done without delay, taking first those parts of the "works where operations are to be the soonest undertaken.

Contemporaneously with these proceedings, working plans and estimates for the proposed Anicut at Kurnool, were submitted to the Government, who by an order, dated 17th April 1860, approved of them, upon which a large number of laborers were employed, the requisite land was handed over by the Government to the Company, and the construction of the work entered upon.

It appears that in accordance with their second recited order of the 4th April, the Government referred the question whether the Mauri Tank properly formed a part of the Company's project or not, to Colonel Bell, then acting as their Chief Engineer in Madras who reported strongly in favor of the practicability and value of that work, and concluded with this recommendation, viz.,—

"I am decidedly of opinion that the construction of the Mauri Tank properly forms "part of the system of works about to be undertaken by the Irrigation Company, and "strongly recommend it should be made over to them."

On the 15th May 1860, the Government made a minute of consultation or order upon this report, from which the following paragraphs are extracted.

"On the second reference Colonel Bell reports, that reservoirs will be necessary "to supply the works of the Irrigation Company during the dry season, and that the "Mari Kanvai is a most favorable site for such a reservoir. He therefore considers that "the proposed Tank does properly form a part of the system of works to be undertaken

"by the Irrigation Company, and strongly recommends that it should be made over to "them.

"The Chief Engineer's report will be laid before the Right Honorable the Secretary "of State, in continuation of the Despatch from this department, dated 4th April 1860, "No. 13, with the recommendation of this Government, that the Màri Kauvai Tank "project should be made over to the Madras Irrigation Company, as forming a proper "part of their general plan; and that they should be allowed to increase the amount of "their guaranteed capital, to the amount necessary to enable them to undertake this "scheme in full.

Some time during these proceedings, (the date is unimportant), indents or particulars of machinery, stores and tools to a large amount (£25,000), required on account of the whole work, were sanctioned by the local Government, some of which to the extent of £12,000 were afterwards purchased in England and transmitted to Madras, and the others were procured either from the Government stores at Madras, or from private traders there. This circumstance is referred to here, to show that the Company incurred expense to be distributed over the whole project, which would not have been wholly incurred if it had been supposed that their operations were to be limited to one section, and this in addition to the expenditure caused by the investigation and surveys conducted over the entire project.

The progress of operations by the Company's Engineer, was reported to the Government from time to time by its Consulting Engineer, and various orders relating thereto passed by them.

On the 29th June 1860, the Secretary of State, without any communication whatever with the Directors of the Company, or intimation of his desire to reduce the Toombuddra project as approved by the Madras Government and adopted by the Company, forwarded the following Despatch to the Government of Madras, viz. :—

"1st. Your letters Nos. 1, 3 and 15 of 4th April last, regarding what is designated "the Toombuddra project of the Madras Irrigation and Canal Company, have been laid "before me in Council.

"2nd. The estimate for the project exceeds by nearly £350,000, the amount "of the Company's guaranteed capital, but you have nevertheless *approved of the whole*, "with the exception of the portion embracing the Mari Tank, upon which you have called "for a Report from your Chief Engineer to assist you in coming to a decided opinion. "Should the Report be favourable, you propose to advise that the construction of the Tank "be committed to the Company; and, that to be enabled to undertake it, they be allowed "to increase the amount of their guaranteed capital.

"3. I must, however, remind you that the great object of the arrangement entered into with the Company was to determine by actual experiment, whether the construc-"tion of Irrigation Works in India can be advantageously undertaken by private enterprise. "With this view, a minimum interest was guaranteed, on an expenditure which it was stipu-"lated should not exceed a million sterling. With a capital of that amount the experiment "can be fairly tried. Should it succeed, no further guarantee will be required. Should it "fail, none can prudently be granted.

"4. I cannot approve, therefore, of the extension of the works to be undertaken by "the Company, with guaranteed capital beyond the sum of one million, to which the "Government guarantee is limited, and out of which the salaries and other expenses of the "Company's establishments, both in England and India, must be defrayed.

"5. If, when those works are finished, the returns from them should be anything like "what is expected, and if there should be good grounds for thinking that the returns would "be proportionably increased by a further outlay, the Company will have no difficulty in "raising additional capital without a guarantee."

Upon which the following order was, on the 9th of August 1860, made by the Local Government:—

"Ordered that a copy of this Despatch be furnished to the Consulting Engineer for "the Irrigation Company with reference to his letters of the 1st of February, and 9th "March 1860, Nos. 36 and 54, for communication to the Agent of that Company."

Down to the time of the receipt by them of a copy of this Despatch, viz., the 13th of September, 1860, (the same having been transmitted to them by their Manager at Madras), the Directors had no knowledge whatever that it was the intention of the Secretary of State to insist upon a reduction of the Toombuddra project, and on the receipt subsequently (that is on the 19th of September) of the following letter written by the Consulting Engineer of the Madras Government to the Company's Manager, viz.,—

"MADRAS, 14*th August* 1860.

"*To the Agent and Manager*

"*Madras Irrigation and Canal Company.*

"The views set forth in the Despatch from the Secretary of State of 29th June "last, render it necessary that there should be some modification of the Toombuddra "project, from that originally contemplated.

"From paragraph 4, you will observe that not only the cost of the works, inclu-"sive of the establishment in India, but that all the home expenses are to be defray-"ed from the guaranteed sum of £1,000,000 sterling.

"It would be desirable, therefore, to ascertain what sum should be set apart for the "expenses in England, say for the next five years, and then to modify the original project "so as to ensure its not exceeding the remainder of the guaranteed capital. I shall be "glad to be favored with the views of the Chief Engineer on the subject, and perhaps it "might be of some assistance to him were I to meet him in consultation upon it, the more "especially as Mr. Agnew the Company's Manager, will probably be there also.

"I have the honor, &c.

"(Signed) F. H. RUNDALL,

"*Captain.*"

They, the Directors, transmitted to their Manager on the 26th September, 1860, instructions directing him to give to the matter his most careful consideration and in concert with the Consulting Engineer of Government so reduce the Toombaddra project as to bring the estimated cost of its construction clearly within 1,000,000*l.*, including the expenses of the Home and Indian establishments.

It subsequently appeared that previously to the receipt of these instructions the Chief Engineer had in anticipation acted upon the request of the Government, and with the full concurrence and co-operation of the Government Consulting Engineer, modified his scheme, and in a Report dated the 19th October 1860, (which was submitted to the Government accompanied by a letter from their Consulting Engineer concurring therein), he set forth the particulars of its estimated cost, taking care apparently to cover all contingencies.

The modified scheme thus planned by the Chief Engineer of the Company, and approved by the Consulting Engineer of the Government, was based upon an assumption that those parts of the entire scheme which it rejected would be afterwards constructed by unguaranteed capital. It consisted of the following portions of the project previously described, viz., the Maury Tank and Channel, a portion of the Lower Bellary section, and the whole of the Kurnool section, leaving the Upper Bellary section and a portion of the Lower Bellary section, the connecting channel between the Toombuddra, and Kistna, the formation of reservoirs on the Toombuddra, Hindri and Huggry River, for future operations with unguaranteed capital.

As evidence of the impolicy of this reduction of the Toombuddra project, if the operations of the Company were to be so limited, its injurious effects upon the experiment whether private enterprise can successfully execute works of irrigation in India, and its injustice to the Company (irrespective of the question whether it was justified by the agreement be-

tween the parties), it may be stated that those localities which were proposed to be abandoned were unquestionably in a state of barren unproductiveness, and the people subject to painful periodical visitations of famine, solely from the want of irrigation to render cultivation attainable, and the amount of estimated profits to belong to the Company would thereby be reduced from 34½ per cent. to 20 per cent.

Whilst this modified project was under consideration at Madras, the following Despatch from the Secretary of State to the Governor General of India at Calcutta was, by the latter, brought to the notice of the Madras Government:—

"India Office, 9th August, 1860.

"My Lord,

"1. I have received from the Government of Madras a letter in this department "No. 27, of 16th May last, recommending that the construction of the Mari Tank be en- "trusted to the Madras Irrigation and Canal Company, and that they be empowered to "augment their guaranteed capital to the amount necessary to include the execution of the "work. The site of the proposed Tank being in Mysore, a territory not as yet placed under "the Government of Madras, my reply to the recommendation in question is addressed to "your Excellency.

"2. My letter to the Government of Madras, No. 41, of 29th June last, stated "that the works to be undertaken by the Irrigation and Canal Company, with guaranteed "capital, must not be extended beyond the sum of one million, to which the Government "guarantee is limited, and out of which must be defrayed the salaries and other expenses of "the Company's establishment both in England and India. The works exclusive of the "Mari Tank, which the Company purpose to undertake, will, if their estimates are correct, "absorb the whole of their guaranteed capital. To commit to them the construction of the "Mari Tank in addition is in such circumstances evidently impossible.

"3. In order to prevent the Company from exceeding the limits of their guarantee, "you will impress upon the Madras Government the absolute necessity of restricting them "to works which shall be perfect in themselves, and shall not require the aid of subsidiary "works to render them remunerative.

"(Signed)

"C. WOOD."

No communication whatever regarding this Despatch, or that of the 9th October, presently referred to, was made by the Secretary of State to the Directors of the Company, although both documents dealt directly with the project entrusted to them.

On the 9th October 1860, the following Despatch was forwarded by the Secretary of State, to the Government of Madras.

"Sir,

"1. With reference to paragraph 4 of my Despatch, No. 41, of 29th June last, I have to "inform you, that, in consequence of repeated applications which I have received to permit "the execution of works connected with the Madras Irrigation Company, the aggregate of "which would involve the expenditure of a larger amount than one million, I must again "impress upon you most strongly, that no interest will be guaranteed upon any sum beyond "a million.

"2. It seems to me that if the works, as now projected, are executed, the cost of which "is estimated considerably to exceed that sum, much confusion will arise as to what portion "is to be included in the guarantee, and what portion is not. It is, therefore, most desirable "that in the first instance, certain works should be fixed upon, the estimated cost of which "will not exceed a million, and which may be so far separated from any other works, that "the profit and loss upon them can be calculated separately. The sum expended upon these "works so set apart, must be considered as a separate capital upon which the interest is "guaranteed. The works to be so set apart must be determined upon by your Government "in communication with the Company's Agent. From what I have myself learnt, I have

" reason to believe that Irrigation works in the districts of Bellary and Kurnool would form " a distinct work, or system of works, to be executed with the million, perfect in themselves, " and the accounts of which might be kept separate."

Subsequently to the receipt of this last recited Despatch, that is, on the 20th November 1860, the Government of Madras entered upon the consideration of the modified scheme submitted to the Chief Engineer of the Company, as also the letter of their Consulting Engineer, and with such Despatch before them, they passed an order in which they disapproved of the omission of the Bellary part of the original project, stating (with perfect truth) that it was one of the chief objects of the Government that Bellary should be supplied with water; and as they concluded, from the Despatch of the 9th August 1860, to the Governor-General, that they were not then authorized to take into consideration any scheme of which the Mauri Tank formed a part; they required the Agent and Manager of the Company to submit a new plan of operations for the Bellary district. They also complained of the omission of reservoirs upon the Toombuddra, &c., irrespective of the Mauri Tank, and they appointed Major Orr, an Engineer Officer of experience in Irrigation works in their employ, to examine, in company with their Consulting Engineer, the Kurnool section of the modified project, the construction of a portion of which had been already commenced with their sanction and authority, and directed that, pending the report of this newly appointed adviser, the further construction of the works at Kurnool should be stopped. In this state the local affairs of the Company stand for the present, waiting the production by the Chief Engineer of the Company, of a second modified scheme, and a Report from Major Orr.

The previous part of this statement regarding the Home proceedings connected with the 2nd Draft Contract, left off with the statement that, on the 14th May 1860, it was returned to the Government altered by the Company's Counsel. It will also be remembered that it has been stated that, on the 29th of June and the 9th August 1860, the Secretary of State, having the Draft Contract so altered before him, forwarded Despatches to the Government of Madras and the Governor-General of India, directing a curtailment of the Toombuddra project, so as to bring its estimated cost within 1,000,000*l.*

No communication was made to the Directors upon the Draft as altered and approved by them, but on the 10th August 1860, the Solicitor acting for the Government transmitted to the Solicitor for the Company a fresh Draft (No. 3,) accompanied by the following letter:—

" 10th August 1860.

" *Madras Irrigation and Canal Company.*

" Dear Sir,

" I send herewith for your approval the Draft Contract, and shall be glad to receive it back " at your early convenience.

" I am

" Yours faithfully,

" H. S. LAWFORD.

" John Mackrell, Esq."

The document which accompanied this letter was certainly a decided improvement, so far as the Company were concerned, upon the Draft No. 2, as originally drawn by the Secretary of State, for it adopted the alterations made by the Company's Counsel in the latter, with a few exceptions, but these exceptions were most important, and rendered it impossible of acceptance. For instance,—

1stly. The recital of the fact that the operations of the Company were to be confined to one work or project to be approved by the Government of Madras, the estimated cost whereof should be 1,000,000*l.*, inserted in the second draft, and which recital was in strict verbal accordance with the first item of the terms of arrangement contained in the letter of 6th December 1858, was altered by the omission of the words, " to be approved by the " Government of Madras," and the insertion of the words " not exceed the sum of," in lieu of the words " to be ;" so that the new recital stood, simply that the Company were to be confined to one work or project, the estimated cost whereof should not exceed 1,000,000*l.*

2ndly. The clause extending the guarantee to the actual cost of constructing the work, and also the arbitration clause, both of which were introduced by the Company's Counsel, were omitted.

Setting aside several minor matters of detail, it may be stated that, with the exception of the two last-mentioned omissions, the document was upon the whole satisfactory, and with their restoration such as the Directors would have accepted; and the discussion was therefore narrowed to the claim on the part of the Company to the restoration of the clauses claimed by them.

With a view of placing before the Secretary of State in Council the objections which existed to the contract thus framed, and the justice of the Company's claim to the clauses in question, the Solicitor for the Company addressed to the Solicitor of the Government on the 19th September, 1860, the following letter:—

"34, Cannon Street West, London, E. C.,
"19th September, 1860.

"*Madras Irrigation and Canal Company.*

"Dear Sir,

"I have perused the Draft Contract between this Company and the Secretary of State in "Council, which you have sent me, and I understand it to be a copy as now revised by you, of "the Draft Contract which was sent by the Secretary of State to the Secretary of the Company "for perusal, and which after having been settled by Mr. J. H. Lloyd on behalf of the Company, "was returned to the Secretary of State.

"The most important alteration made in revision of the Draft Contract, is the striking out "the clauses as to the guarantee of interest on any future capital beyond the sum of 1,000,000*l*. "which it may be requisite to raise, to carry out, or obey, those directions of the Secretary of "State in Council, which the Company would by the terms of the contract be bound to carry "out and obey.

"Looking to the Draft as it now stands, I cannot but think that the true position of the "matter has not been seen, or understood, and I hope when this position is pointed out, there "will be no difficulty in our agreeing on terms consistently with the arrangement come to, and "the plain equities of the case.

"I venture therefore to make the following observations:—

"1. By the terms of the arrangement the operations of the Company were in the first "instance, to be confined to one work or project, to be approved of by the Local Government, "the estimated cost of which should be 1,000,000*l*. sterling, upon which amount, interest at 5 "per cent. was to be guaranteed by the Government, and the surplus returns from such works, "after payment of all expenses, and of the guaranteed interest, were to be divided equally be-"tween the Government and the Company.

"2. The principal consideration for the Government receiving one moiety of the profits to "be derived by the Company's operations after the payment of interest, was the grant of the "guarantee upon the stipulated capital to be raised, and the arrangement seems clearly to con-"template a division of profits arising from the outlay of capital on which interest was guaran-"teed.

"3. The Secretary of State moreover stipulated for the same supervision and control over "the proceedings and expenditure of the Company, as he possessed over those of the Guaranteed "Indian Railway Companies.

"4. The supervision and control so stipulated for, give to the Secretary of State in Council, "very large powers, and place the operations of the Company entirely under his directions. "Amongst other provisions contained in the Draft Contract with reference to such supervision "and control, I may notice the following:—The Company are to make and prepare the neces-"sary surveys, plans, and estimates of such of the works comprehended in the Toombuddra "project, as may have been provisionally approved by the Secretary of State in Council, and to "submit the same together or in portions to him for approval, and he may approve the same "with such alterations therein, or additions thereto,' as he may think fit to make. The Company "are (whatever may be the cost) to execute and construct the works shown in such plans, and

"in accordance therewith, and are in addition thereto, to execute and reconstruct 'all such buildings, offices, warehouses, fixed machinery and other advantages and conveniences, as in the "opinion of the Secretary of State in Council shall be necessary or expedient.' Besides this, (if "the Company carry on navigation), they are to provide such boats, barges, vessels, &c., as the "Secretary of State in Council may from time to time direct.

"5. The Secretary of State in Council may not sanction the execution of any larger work "than can be expected to be covered by the contemplated outlay; but it may happen, that this "expectation may not be realised, or that in the exercise of the power he has reserved to himself, he may sanction or direct the execution of works, the cost of which will exceed "£1,000,000.

"6. The absolute right to decide upon the works to be executed, and the contract and "supervision of the Company's proceedings being thus provided to be reserved to the Secretary "of State in Council, it is only consistent and right that he should assent to proper provisions "being made for raising any monies (beyond the stipulated amount,) which it may be necessary "to raise, in order to obey or carry out his directions.

"7. On reference again to the draft, I find however that by its provisions,—

"A. The Company are to provide all monies which may be required to carry out the "requirements of the Secretary of State in Council.

"B. Such monies are constructively to be paid into the Indian Treasury, and are to "be expended only with the sanction of the Secretary of State in Council.

"C. The Government are to guarantee and pay the interest on £1,000,000 only, "whatever may be the amount which it may be requisite to raise.

"D. The Government are to receive one moiety of the profits, to be derived from "the whole of the undertaking, (notwithstanding, interest on perhaps only a portion of "the outlay may be guaranteed), after repayment of the guaranteed interest on only "the £1,000,000, thus deriving a larger share of profit from the works executed with the "capital in excess of that sum, than on those executed with it, for no interest is to be first "allowed to the Company on the further capital which may be raised.

"8. The guarantee accorded to the Railway Companies has been in the first instance "limited to a stipulated sum, but as the Government have had the direction and control of the "works to be executed, the contracts have in every case, provided that in the event of a further "capital being required to carry out works directed or sanctioned by the Government, the "guarantee should be extended to such additional capital.

"9. When therefore the Government stipulated for the same supervision and control over "the expenditure and proceedings of the Company, as it possessed over those of the Guaranteed "Railway Companies, it followed as a natural consequence that they should accord the same "advantages in respect to additional capital, requisite to be raised to comply with the terms of "such stipulations.

"10. It was evidently not contemplated, and it would not be reasonable to ask the Company to provide additional capital, (and this to an unlimited extent), to carry out or obey the "directions of Government, and for Government to derive one full moiety of the whole profits "arising from the outlay of such additional capital, without the Government according a similar "guarantee to that granted in respect of the original capital.

"11. If the works do not succeed as anticipated, the Company cannot without a guarantee "raise the additional capital, which the Secretary of State may render necessary to be raised, "and would therefore be unable to comply with the terms of the contract as it stands, and the "works might in consequence be taken possession of by the Government, and should the returns "from the works be anything like what is expected, the guarantee would be purely nominal.

"12. Assuming, however, that the Government should be willing to forego participation "in the profits of any outlay beyond £1,000,000, if the guarantee be limited to that amount,

" how will it be possible to decide what portion of the profits belong to the first outlay of " £1,000,000, and what to the outlay beyond that sum?

" 13. It may be that one work can be made complete for less than the stipulated sum, but " the further works may be so materially benefited by the first outlay, that a large proportion " of the profits derived from them should be fairly attributed to the first capital, whilst on the " other hand, works which may be reasonably expected to be completed within the prescribed " outlay, may (from no fault of any one as experience proves) exceed that amount, in which case " I do not see how the profits can be fairly apportioned.

" 14. It seems, therefore, impossible properly to provide for any such arrangement as I " have mentioned in paragraph 12.

" 15. It being then in the power of the Secretary of State to limit the works to be executed " or to extend them as he may think fit, I do not see what practical objection there can be to " similar provisions being accorded to the Company as have been granted to Railway undertakings " established on a similar footing, nor do I see what other arrangement can fairly or consistently " be come to, or which will not involve difficulties and complications hereafter; but if you can " suggest any, I shall be happy to consider it.

" 16. This is the most important point in the draft contract, as revised, and I do not " anticipate any difficulty in settling the other revisions, which seem to be rather matters of " detail than of principle.

" 17. The draft originally sent by the Secretary of State was settled on behalf of the " Company by Mr. Lloyd upon instructions, a copy of which I send herewith, and upon the " perusal of the correspondence and papers mentioned on the back thereof.

" 18. From these instructions you will observe that the draft has been settled with reference " to the correspondence which forms the basis of the agreement between our clients, and where " these do not apply upon terms which Mr. Lloyd has considered to be fair and reasonable.

" 19. I doubt not that the Secretary of State in Council agrees with my clients in wishing " to have the draft contract settled upon this basis, and as it is desirable to settle the draft with- " out further delay, I beg to propose that you and your Counsel should meet Mr. Lloyd and " myself in conference, when I hope we may be able to settle the draft in a manner which may " be mutually satisfactory.

" Apologising for the length of this communication, which I have endeavoured to make as " brief as possible,

" I am, dear Sir,

" Yours truly,

JOHN MACKRELL."

In reply to this letter the Solicitor for the Government wrote thus:—

" 6th October, 1860.

" Dear Sir,

" I beg to acknowledge the receipt of your letter of the 19th ultimo, which " I submitted to the Secretary of State in Council. I am now authorized to inform you that Sir " C. Wood has no objections to a conference on the subject of the proposed Contract being held " by the Counsel and Solicitors on both sides, provided it be distinctly understood that no " deviation can be permitted from the original agreement, whereby the capital on which inter- " est is guaranteed is limited to 1,000,000*l*. sterling. Upon hearing from you that you still wish " for the proposed conference, I will lose no time in instructing Mr. Forsyth with a view to our " meeting in November next to discuss the subject irrespectively of the point upon which the " Government insist.

" I am, &c.,

" H. S. LAWFORD."

" J. Mackrell, Esq."

To this the Solicitor for the Company replied on the 17th October:—

" My clients still wish for the proposed conference. A letter has been sent by the Company to their agent, a copy of which I enclose, from which you will see that they are sincerely desirous to meet Sir C. Wood's views."

1050.

The letter here referred to was that before mentioned as having been sent on the 26th September 1860, directing their Engineer to modify the project so as to bring its estimated cost within 1,000,000*l*.

In accordance with the understanding thus arrived at a conference was appointed between the Counsel representing both parties—Mr. Forsyth and Mr. Melvill on the part of the Government, and Mr. Rolt and Mr. Lloyd for the Company.

Prior, however, to this appointed conference taking place, a plan whereby the entire Toombuddra project might be executed by the Company, and at the same time the guarantee of the Government be most effectually limited to an expenditure of 1,000,000*l*. suggested itself to the Secretary of the Company, who drew up and laid before Counsel observations embodying his ideas. This suggested plan may be thus described, viz. :—

1. That a plan and estimate of so much of the whole project as would represent a self contained work, though perhaps part of a larger project, and which might be reasonably supposed to be capable of being carried out for 1,000,000*l*., should be drawn up and submitted to the Government for approval, and that the work so represented should be taken to be the work to be carried out by the guaranteed capital.

2. That the powers of altering the plans and adding to the works, vested in the Secretary of State by the existing Agreement should be so limited as to render it impossible for him by his own acts to increase the cost of this work beyond the estimate.

3. That if during the construction of the work so selected it should appear that the estimate would be exceeded, the Company should be at liberty to abandon such portion as they thought fit, so as to render the expenditure of guaranteed capital beyond 1,000,000*l*. impossible.

4. That the Company should be at liberty to raise such additional capital as they might think fit, to carry out the whole of the remaining portions of the Toombuddra project *without a guarantee*, upon the following terms :—

(1.) That the capital should be raised by the Company without a guarantee of interest thereon being solicited from or given by the Secretary of State.

(2.) That the works not carried out by the guaranteed capital should be constructed in conformity with plans approved by the local Government.

(3.) That all land considered by the local Government to be necessary for such works should be provided in the first instance free of charge, but that its full present value should eventually be paid by the Company by instalments after their dividend should reach £5 per cent.

(4.) That the whole profits derived from the works constructed with the unguaranteed capital should belong to the Company. And

(5.) That the Company shall be subject, in respect to its unguaranteed works, to such of the terms of the Draft Contract under consideration with reference to the sale of water for irrigation, the navigation of Canals, the levying of tolls, &c., as might properly be made applicable thereto.

Precisely the same terms as those here proposed to be applied to the Capital raised without a guarantee having been shortly before granted by the Secretary of State in Council to another Company, viz. :—The East India Irrigation and Canal Company ; it was supposed that the proposal would have been acquiesced in.

A copy of the instructions so laid before the Company's Counsel was immediately transmitted by the Secretary of the Company, to the Secretary of State in Council, accompanied by a letter requesting that he (the Secretary of State) would instruct the Counsel of Government upon the matter prior to the conference. This letter was forwarded on Wednesday, the 14th November 1860, and on the following Wednesday, viz., the 21st November 1860, the appointed conference between the Counsel and the Solicitors was held, when after considerable discussion, and careful investigation into the mode of carrying out the Secretary's plan, the Counsel for the Government,

as well as the Counsel of the Company, pronounced it to be the only fair and equitable solution of all difficulties, and desired the Counsel for the Company, to alter the draft contract, (No. 3,) in accordance therewith, and submit it to them for perusal on behalf of the Government. It must, however, in fairness to the Counsel of the Government, be added that at the time they expressed their approval of the proposal, they stated they did so, subject to the approval of the Secretary of State in Council.

It will have been observed that during the negotiation connected with the draft Contracts 2 and 3, various clauses advantageous to the Government were assented to by the Company, because they appeared equitable and proper between the parties, provided the clause for an extension of the guarantee to the cost of the construction of the work, claimed by the Government, was attached to them, but not otherwise. In truth, the Directors were willing that the contract should be made (except as to the particular points specifically arranged by their correspondence) to approach as nearly as possible to those entered into with the Railway Companies, but they did not feel themselves justified in adopting all the clauses contained in those Contracts advantageous to the Government, at the same time giving up the only one beneficial to their Shareholders, and to which they conceived they had a substantial claim.

Acting upon the suggestions of the Counsel representing the Government, the draft Contract (No. 3), was altered, so as to carry out the suggested plan, and all those equitable clauses to which reference has just been made, and which it was contended formed no part of the original agreement; were noted in the margin thus: " This forms no part of the original agreement; but see note at foot."

The clauses or conditions thus noted were:—1. With respect to the navigation of the canals, &c., if adopted by the Company; that the Company should convey, free of charge, the Mail bags, Post-office servants, &c., and all Military Officers and Stores, at reduced fares.

2. With reference to returns. That the Company should charge for water supplied from their works for other purposes than irrigation, and for the conveyance of passengers, goods, &c., such charges, fares, and tolls, as the Secretary of State should approve.

3. With reference to interest advanced under the guarantee. That the Company should pay simple interest at 5*l*. per cent. upon all sums paid by the Secretary of State for or in respect of the guaranteed interest, *i. e.*, in addition to the repayment of such advances.

4. That if default should be made by the Company in raising the capital of 1,000,000*l*., or in observing the covenants of that contract, the Secretary of State should be at liberty to take possession of the works, &c., paying to the Company the capital expended with his consent, and the unexpended capital (if any) in his hands.

5. That if the Company neglected to repair the works, &c., after notice, the Secretary of State should have power to do such repairs, and to deduct the cost thereof from any monies belonging to the Company. And

6. That in every case where the Secretary of State should become liable to pay for the purchase of the works of the Company, he should be at liberty to pay an annuity in lieu of a gross sum.

The note referred to as at the foot of the draft was as follows:—" This draft contract has " been altered by the Counsel of the Company, to carry out the views of Counsel on both sides, " expressed at their recent conference as being the only proper and fair solution of the difficulty " experienced in meeting the wishes of the Secretary of State in Council to limit the guarantee " of interest to 1,000,000*l*. In consenting to waive the rights which the Company are advised " they have to an extension of the guarantee and otherwise, they do so upon the understanding " that the draft as now altered is in principle accepted.

" JOHN MACKRELL, 34, Cannon-street West,
24th November 1860."

The draft thus amended, in accordance with the request of the Counsel representing the Government, and which really appeared to carry out the very conditions which the Secretary of State had put forth in the letter agreeing to the conference between Counsel, and also to coincide with the views expressed by him in his several Despatches to the Governor-General and the Government of Madras regarding the limitation of the guarantee (though these dispatches were not then known to the Company) was forwarded to the Solicitor of the Government with the following letter:—

"34, Cannon Street West, London,
"24th November 1860.

"*Madras Irrigation and Canal Company.*

"Dear Sir,

"I have altered the Draft Contract in accordance with the arrangement come to at the con- "ference of Counsel, and I return draft herewith.

"You will notice one or two alterations which were not mentioned at the conference, it "being considered that no objection would be made to them.

"I am, Dear Sir, yours truly,
"J. MACKRELL.

"H. S. LAWFORD, ESQ."

"P. S.—The general meeting of the Company is to be held on Thursday next, and it would "be very desirable that I should hear by the morning of that day that your Counsel approves the "alteration.—J. M."

Subsequently to these proceedings, viz., on the 30th November 1860, the following letter was received by the Company from the Under Secretary of State:—

"India Office, S. W.
"30th November 1860.

"Sir,

"I am directed to acknowledge the receipt of your letter to Sir C. Wood of the "15th instant.

"In the memorandum placed by you in the hands of the Madras Irrigation and Canal "Company's Counsel, and communicated to Sir Charles Wood with that letter, the Toombuddra "project is represented to be divisible into four sections, viz.:—

"1.	The Kurnool section, estimated...	£415,250
"2.	The Lower Bellary ditto.	288,950
"3.	The Mauri Tank ditto.	226,000
"4.	The Upper Bellary ditto.	415,252
	"The estimate of the whole being	£1,345,450

"Of these sections you propose that the first three shall be constructed with the Company's "guaranteed capital of a million sterling, and that for the fourth the Company shall be empow- "ered to raise additional capital without a guarantee, on the same terms as have lately been "granted to the East India Irrigation and Canal Company.

"I am to state in reply, that as Sir C. Wood considers it necessary strictly to adhere to the "limit of £1,000,000 for the guarantee, so he considers it also unadvisable for the Company to

"undertake, and impossible for him to sanction their undertaking, with unguaranteed capital,
"any work calculated to carry the total expenditure beyond that sum of one million.

"Sir C. Wood feels, therefore, compelled to answer in the negative the proposal conveyed "in your letter.

"I am, however, to add as follows for the information of the Company :—

"No complete and reliable estimates of either of the four sections of the proposed works, "specified in your letter, have as yet been laid before Her Majesty's Secretary of State in Council, and until such estimates have been so laid and considered, it would not be in Sir Charles "Wood's power to sanction definitely any specific work as 'the work or project' mentioned in "the heads of agreement.

"Subject however to this general observation, I am to state that with regard to Section 3, "(Mauri Tank project), it appears that serious objections are raised to it by the Mysore authorities, which Sir Charles Wood does not at present feel himself at liberty to overrule.

"With regard to No. 4 (Upper Bellary Section), this is only named by you as to be executed with the unguaranteed portion of the proposed amount of Capital, and the proposal "must therefore be regarded as negatived for the reasons already given.

"There remain No. 1 (Kurnool), and No. 2, (Lower Bellary Section).

"These two according to your letter, would require about £700,000. But in the absence "already alluded to, of reliable plans and estimates, Sir C. Wood cannot feel satisfied that a far "larger sum may not be needed for their execution.

"He is therefore compelled to restrict the sanction of Her Majesty's Government for the "present to No. 1, the Kurnool section, subject as before observed to full plans and estimates "having been received and approved, this being the portion of the works (according to the information before him), of which the construction has been commenced.

"And he is rendered the less reluctant to suggest this limit for the operations of the Company, at least, until much greater experience of the probability of ultimate success has been "obtained from the circumstance that the Company's Chief Engineer has reported that this portion (the Kurnool Section) will be a complete and in itself a reproductive work.

"The result, therefore, will be that the terms of the contract must be so framed as to correspond with the heads of agreement contained in your letter of the 6th December 1858.

"With reference, however, to the last paragraph of your present letter, I am to add that "Sir C. Wood does not wish to insist on the retention of any provisions of the present draft "contract, which cannot be fairly shown to be included within those heads.

"I am, Sir,

"Your most obedient,

"T. G. BARING.

"J. WESTWOOD, ESQ."

This letter, it will be seen, attempted to ignore everything which had taken place in connection with the conference between the Counsel of the parties. It has not yet been replied to by the Directors, because they have been of opinion that, taken by itself, it afforded no matter for reply, and they resolved to await the receipt from Government of the draft contract which Sir Charles Wood suggested should be framed in accordance with the heads of arrangement contained in their letter of 6th December 1858, and then to discuss the contents of both documents. They felt that if such draft contract should be found fairly to carry out those heads of arrangement, they could properly accept it, although it might be that the subsequent proceedings had considerably extended or altered the position of the Government and themselves. They desired only a fair settlement.

On the 8th January 1861, a fourth form of draft contract was forwarded by the Solicitor for the Government to the Solicitor for the Company, as representing (it is presumed) the draft referred to in the letter of the Under Secretary of State of the 30th November.

This draft contains the same recital regarding the first work or project to be undertaken as draft No. 3. It then recites that the Company proposed, as the work to be constructed, a certain work for providing irrigation and means of water transport *to the district of Kurnool and neighbouring districts in the Presidency of Madras, which work is known between the parties as the Kurnool project.*

It omits the recital of the fact that the Company had entered upon the investigation and surveys of portions of the Toombuddra scheme, and also upon the construction of a portion of the works. It binds the Company to prepare in detail plans and estimates of the works comprehended in the Kurnool project, and gives to the Secretary of State all those powers of alteration and addition to such plans, and of directing the construction of other works and conveniences, which all the other drafts contained; but limits such powers, so that thereby the cost shall not be increased beyond £1,000,000, and it compels the Company to carry out the works according to the original or altered plans; providing, however, that if in the course of construction it shall be found that the sum of £1,000,000 will be exceeded, the work shall be reduced so as effectually to keep the cost thereof within £1,000,000. In truth, it may be stated that the alterations which had been made by the Counsel of the Company in draft No. 3. (to meet the proposed new state of circumstances created by the plan suggested by the Secretary), and also all the clauses which in the last-mentioned draft were notified as forming no part of the original agreement, are retained; but the clauses with reference to the completion of the work by means of unguaranteed capital are omitted, and it does not contain a clause extending the guarantee to the actual cost of construction, so that it is in fact a contract limiting the Company's operations to the Kurnool section of the Toombuddra project, the estimated cost of which may be put down at about £600,000, giving to the Secretary of State power to increase its cost to £1,000,000, by the addition of such works and *conveniences* as he may think necessary, and directing such reductions and alterations as he shall approve of, to be made after even a large portion of the works may have been executed if it shall appear that the whole work planned in the first instance with his approval will cost more than £1,000,000, the guarantee being at the same time strictly limited to that sum.

It has been already stated that the proportion of the profits which would be derived by the Company from the outlay of £1,350,000 upon the whole work was estimated at 34½ per cent., and that upon the expenditure of £1,000,000 upon the modified project subsequently submitted, those profits would be reduced to 20 per cent. only, and it is right to add, now that if the Kurnool Section alone is carried out, those profits will be still further and seriously reduced, and larger portions of country and larger numbers of the population abandoned.

This being the position of affairs between the Government and the Company, the Directors of the latter think it right before taking any course upon the Draft Contract as now sent to them, to be fully advised as to the exact position in which the Company stand with the Government, as to the legal rights of both parties.

It seems scarcely necessary to offer any observations upon this now, as in the course of the preceding statement and in the Letters therein set out, the views of the Company, and of their legal advisers, have been fully adduced or referred to.

OPINION OF MR. ROLT, Q. C., AND MR. J. H. LLOYD.

1. We do not think it very material to determine whether regard is to be had to the whole correspondence anterior to the letter from the Secretary of the Company, of the 6th December 1858, or to that letter only, because we are of opinion that that letter contains a fair and accurate

statement of the relative position of the Government and the Company, as resulting from the previous correspondence. It may, therefore, be taken as the substance and basis of the contract proposed to be entered into.

2. We are of opinion that the legal effect of that statement, and of the correspondence of which it is an epitome, has not been materially varied by anything which has subsequently passed. We think, on the contrary that the Secretary of State having acquiesced in it as an embodiment of the terms on which a formal contract was to be based, and having knowingly permitted the Company to act upon that assumption, 1st, by raising the capital for carrying it into execution; 2ndly, by payment of more than half of the whole capital, £550,000, into the Indian Treasury to the account of the Secretary of State, and upon the faith of the promised guarantee; 3rd, by an actual commencement of the work; and, 4th, by appointing a chief Resident Engineer at a high salary, and having also required that Sir James Melvill should take his seat at the Board as an ex-officio Director, has conclusively affirmed the substance of the terms so propounded, and established a contract which, according to the ordinary principles of law and equity, would be held binding.

3. We are further of opinion that, according to the fair construction of the terms so arranged, the subject of the contract was to be some defined work or project complete in itself, of which the estimated cost was to be in round numbers £1,000,000, to be selected with the approval of the local Government of Madras, and to be executed according to plans also to be approved by them: that the words "in the first instance" were intended rather to imply that other works of a like kind, but distinct in themselves, might afterwards be undertaken, than that auxiliary works might be superadded to and form part of the first project: that the expression "to be approved by the Local Government" means an approval to be officially certified to the Company, and (perhaps) to the Secretary of State for India; and that "the estimated cost" meant the cost not as arrived at by a detailed calculation of quantities, but as approximately ascertained by a general or preliminary estimate, in fact such an estimate as was subsequently made by the Officer of the Madras Government.

4. There may, we think, be some question whether there has yet been any such final sanction by the Madras Government of the whole Toombuddra Project, as would satisfy the requirements of an approval, but we are of opinion that the scheme of the Kurnool and the two Bellary sections have been so far selected and approved, as to disentitle the Indian Government or the Secretary of State now to reject that scheme or any substantial part of it.

5. We are of opinion that the Company have done all that was required of them for fixing upon a definite work, and arriving at an estimate of the cost of such work, as a preliminary to the sanction of the Madras Government.

6. Strong reasons may be urged in favor of the legal view that the Company were, according to the terms arranged, entitled to have the guarantee extended to any sum beyond the £1,000,000 which might be required and properly expended in completing the work estimated at £1,00,0000. But as this conclusion is an inference from the terms and not an express stipulation, and as the Secretary of State appears to have a strong objection to an extension of the guarantee, we do not think it expedient for the Company to press this point, and the rather as they seem to have intimated in the later correspondence a disposition to meet his views.

7. The Government cannot upon the contract or correspondence claim interest on the sums advanced for payment of the guranteed interest, as there is no express provision to that effect; and, therefore, the only ground on which it could be claimed, would be that *all* the provisions usually imported into contracts with the Government for Railway works in India, are applicable to this case where not otherwise expressed; but this agreement would also let in the claim of the Company to a guarantee beyond the estimate.

8. Assuming that the questions were brought under the cognizance of a Court of Equity, by an application for specific performance, we think there are sufficient materials for forming a formal contract to the following effect:—

That the Company should undertake, and the Government sanction the execution of the Scheme, as mentioned in paragraph 4 of our opinion. That the Secretary of State should have and exercise such supervision as would be required for ascertaining that the work was efficiently performed and the expenditure properly made, at all events up to the £1,000,000 on which the guarantee attached, but no further direct control than might be necessary for that purpose. That the capital for the work on which the guarantee was to attach should be £1,000,000. That any further sum might be raised by the Company, if required, and to the extent required, for the perfect completion of the work but whether with or without the gurantee of the Government, would be as we have said somewhat doubtful. That the government would be entitled to an equal participation in surplus profits, after working expenses and payment of guaranteed interest. And, lastly, that the Company should have and exercise the right to reduce the work, so as to keep it within the prescribed £1,000,000, but without impairing the efficiency or completeness of any part or parts of the scheme actually undertaken.

Moreover, without pronouncing any positive opinion on the question how the additional capital beyond the £1,000,000, if found to be absolutely necessary for making the work complete, should be dealt with, we think it clear that at all events the Government ought not, if the gurantee is not to attach upon that additional capital, to insist upon a participation in surplus profits as proposed; but that in this as in some other respects the terms should be, as they might easily be, modified and adjusted on some more equitable basis, and we think the Company are fairly entitled to claim such an adjustment.

9. It is evident, we think, that the conditions now sought to be imposed by the Secretary of State, do not accord with the above outline of what we consider to be the legal effect of what has passed; and we may say further, that in our opinion the proposal to limit the work to be executed to a partial operation not complete in itself, and estimated to cost some £600,000, with power to the Government at its own will and discretion to increase the expenditure on such a work up to the guranteed £1,000,000, is a departure both from the letter and from the spirit of the arrangement, and one which the Directors of the Company ought not to be called upon to assent to.

Lastly. We think that a strong representation should be made to the Secretary of State for India, setting forth the substance of the arrangement as it stood at the time it was first acted upon—the acts done by the Company at the instance of the Secretary of State on the faith of that arrangement—the departure from that arrangement involved in the proposition last made—the embarrassment thereby occasioned to the Board, and the positive loss and injury to the Company and its Shareholders which must result from the persistence of the Government in those conditions.

JOHN ROLT,
J. H. LLOYD.
Lin. Inn, 25th Feb. 1861.

No. 114. ORDER THEREON, 3rd May 1862, No. 947.

Paragraph 11 of this Despatch will be communicated to the Consulting Engineer Irrigation and Canal Company with a request that he will be so good as to furnish the information therein called for with as little delay as practicable for transmission to the Right Honorable the Secretary of State.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 115. Read the following Proceedings of the Madras Government in the Military Department, dated 28th April 1862, No. 1,524.)

Stating that they have no objection to the course proposed by the Deputy Chief Engineer, Southern Circle, regarding the removal of night soil from the Wellington Barracks. } (Vide Military Proceedings, 28th April 1862, Nos. 545-546.)

No. 116. ORDER THEREON, 5th May 1862, No. 948.

Communicated to the Deputy Chief Engineer, Southern Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 117. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 3rd April 1862, No. 12,238.

Read the following letter from Captain W. C. PALMER, Acting District Engineer, Trichinopoly, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Camp Sirdyoor, 25th March 1862, No. 1,955 :—

SIR,

1. Referring to paragraph 13 of my letter No. 1,919 of yesterday's date, I have the honor to forward you copy of a Statement, which accompanied letter from this Office No. 1,023 of the 7th October 1858, showing the expenditure on Irrigation repairs during the time the Maramut was under the Revenue Department for five years prior to the transfer to strengthen my assertion of the great reductions made in that one item of expenditure alone by this Department since its organization, and especially during the past two years ; and when the rise in the rates of labor and materials is taken into consideration, the reduction in the expenditure of this department will be even more manifest.

Under Mr Acting Collector Walhouse's signature.

2. The years 1859-60, 1860-61 should not as you are aware be included in the comparison, as they are exceptional ones, and the large expenditure was required to repair the damage done by the extraordinary floods of those years.

3. Were the works in such bad order as the address would lead any one to believe, I might point to to the reduction in expenditure as the chief cause, but I do not admit (as shown in my letter) the correctness of the Petitioner's assertions.

No. 1,949, paragraphs 5 to 8.

Statement showing the amount actually expended during each of the last 5 years previous to 1857-58, on repairs of Irrigation works in the District of Trichinopoly.

Years.	Ordinary.			Emergent.			Total.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
1852	63,978	5	10	5,693	0	0	69,671	5	10
1853	64,054	3	2	36,962	3	10	1,00,996	7	0
1854	980,25	0	1	12,880	12	2	1,10,905	12	3
1855	98,923	9	7	14,755	9	4	1,13,679	2	11
1856	93,718	6	2	16,643	7	2	1,10,361	13	4

(Signed) M. J. WALHOUSE,
Acting Collector.

(True Copy.)

(Signed) W. C. PALMER, Captain,
Acting District Engineer, Trichinopoly.

1 Original letter, with one enclosure, No. 1,955, dated 25th March 1862.

Submitted for the information of Government, in continuation of Endorsement No. 12,081, dated 28th March 1862.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 118. ORDER THEREON, 5th May 1862, No. 949.

Recorded, with reference to Proceedings No. 797, dated 17th April 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 119. Read the following Proceedings of the Madras Government in the Military Department, dated 25th April 1862, No. 1,484.

Approving of the estimate for constructing a building of two floors to be used as a Malt Liquor Store by Commissariat Department. } (Vide Military Proceedings, 25th April 1862, Nos. 488-489.)

No. 120. ORDER THEREON, 5th May 1862, No. 950.

Communicated to the Acting Deputy Chief Engineer, Central Circle, who is requested to report the source from which the sum of Rupees 1,740 (being the difference between the estimated* amount and that† provided for in the Budget of 1862-63) is to be obtained.

* Rupees 10,380.
† " 8,640.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 121. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 24th March 1862, No. 6:—

SIR,

1. I now proceed to reply to letters Nos. 80, 81 and 82, from your Government in the Public Works Department, dated respectively the 7th, 10th and 24th of December last.

No. 80.—Failure on the part of Covenanted Engineers sent from England to pass an examination in the Native languages.

2. After the opinion given by the Advocate General upon the subject, you had no alternative but to direct that the sums forfeited by Mr. Dudgeon and other Covenanted Subordinates similarly situated, should be refunded. Your resolution, however, that the promotion to certain appointments of candidates otherwise eligible should depend upon their passing the prescribed examinations for those appointments is approved, and in any future Covenants measures shall be taken to avoid a recurrence of the question raised in Mr. Dudgeon's case.

No. 81.—Operative Mechanical Class in connexion with the Civil Engineering College.

3. I concur in the remarks of your Chief Engineer as to the expediency of having a body of men specially trained in India for the Public Works Department, as Operative Mechanics, and although it has been found necessary for the present to withdraw from the Government Workshop, the students who were under Mr. Flockhart's instruction, it is to be hoped that the interruption thus occasioned, will not be of long continuance. It is, I observe, your intention to re-constitute the class as soon as a departmental workshop shall have been established on a scale such as will afford constant and systematic employment to the students.

No. 82.—Futher report relating to the trial of Ransome's Patent Solution for preserving stone.

4. A copy of your further Report upon this subject has been forwarded to Mr. Ransome, the Patentee.

No. 122. ORDER THEREON, 5th May 1862, No. 951.

1. Ordered that paragraphs 2 and 3 of the foregoing Despatch be communicated to the Chief Engineer for information.

2. Ordered also that paragraph 2 be communicated to the Deputy Chief Engineers, Northern, Southern, and Central Circles.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 123 Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 21st March 1862, No. 221/M 41 :—

SIR,

1. I trust Government will not deny me the privilege of an appeal to the Government of India upon the subject of the reduction of my salary, referred to in Order of 17th March 1862, No. 462.

No. 462, dated 17th March 1862.

2. It would of course be unbecoming in me to animadvert upon a regulation the object of which can alone be the protection of the public interests and the promotion of efficiency in the public service. But as I deem that Government, in authorizing it, could never have contemplated the achievement of that object at a cost involving absolute pecuniary loss, or, if I may employ the term, injustice to their servants, I venture to solicit a reference to higher authority upon the subject.

3. When I arrived from England in December last, I was informed that Lieutenant-Colonel Ludlow having been absent from India considerably more than six months, the salary of this his office was at disposal; and having been honored by a nomination to it, I entered thankfully upon my present duties. Greatly to my surprise I learnt, on the presentation of my first Abstract, that by a foot note introduced in page 8 of the former Regulations, I was precluded from drawing more than a moiety of the salary apportioned as their recompense.

Note to Rule 40, Military Pay and Audit Regulations, page 8.

4. The Officiating Civil Paymaster, as the expounder of the Rules and Regulations of Government, has pronounced that the note in question admits of no other interpretation; and his judgment is of course authoritative. In seeking, therefore, to refer the matter, I am not appealing against that Officer's decision, but against the hard application of the law which he quotes in a case such as mine; where deprivation of guerdon for work honestly performed is made to constitute a source of absolute profit to Government, a source which I cannot think it was ever contemplated to supply by such means.

5. I am informed that after I have served six months in my present appointment I shall be entitled to draw the full salary; but to recite this in my case is vain, because when I was nominated to it there were not six months of Colonel Ludlow's leave left for me to serve in, that Officer's absence from duty being authorized only till May next.

6. Whether I have, or have not, efficiently performed the duties of the office entrusted to me is of course beside the question; I may nevertheless be permitted to advert to the circumstance, well known to the Chief Engineer, that owing to causes which were beyond control, the work of the Northern Circle had fallen greatly into arrears, every one of the new projects and estimates entered in the Budget of 1862-63 remaining to be digested and submitted to Government. To clear off these arrears naturally called for unusual personal exertion, and it seems hard that the fair and allotted requital for the labor bestowed should now be withheld; and that my emoluments should be reduced, not only to less, but to one-half less than the stipend received by the seven District Engineers, whose proceedings I have to control, and for the due discharge of whose duties I am responsible.

7. It is, I submit with all respect, discouraging to Officers of my standing and service (30 years), to find themselves placed by the operation of new Regulations, in a position of such apparently undeserved disadvantage.

No. 124. ORDER THEREON, 5th May 1862, No. 952.

Ordered that the foregoing letter from the Acting Deputy Chief Engineer, Northern Circle, together with the papers noted in the margin, be submitted to the Government of India.

No. 247, dated 18th February 1862.
No. 462, dated 17th March 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 125. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, Fort Saint George, to the Secretary to the Government of India, P. W. D., dated 5th May 1862, No. 953.

SIR,

Proceedings, No. 247, dated 18th February 1862.
Do. No. 462, dated 17th March 1862.
Lieutenant-Colonel Ouchterlony's letter, No. 221, dated 21st March 1862.

1. I am desired by the Madras Government to submit for the orders of the Right Honorable the Governor General in Council the papers noted in the margin.

2. Under the Notification, Financial Department, Fort William, No. 25, dated 28th March 1860, no Military Officer in Civil employ appointed to act for another is entitled to full Staff pay until he shall have performed the duties for more than six months.

3. The case brought under review in the papers submitted with this letter is that of Lieutenant-Colonel Ouchterlony, of the Madras Engineers, who was appointed on the 10th January 1862, to act as Deputy Chief Engineer, Northern Circle, during the absence of Lieutenant-Colonel Ludlow. In accordance with the ruling of the Notification abovementioned, the Civil Paymaster declined to pass to Lieutenant-Colonel Ouchterlony more than a moiety of the salary attached to the appointment during the first six months, and without attempting to question the correctness of the Civil Paymaster's proceeding, that Officer referred the matter to this Government under the impression that they would not be indisposed to relax the Rule in his case, particularly as Lieutenant-Colonel Ludlow for whom he is officiating has been absent from India twelve months, and draws no Civil salary.

4. The orders of this Government declaring their inability to authorize any relaxation of the Rules in favor of Lieutenant-Colonel Ouchterlony, will be found in their Proceedings, No. 462, dated 17th March 1862, herewith enclosed.

5. In his letter No. 221, dated 21st March 1862, Lieutenant-Colonel Ouchterlony solicits the privilege of an appeal to the Government of India on the subject, and it is in compliance with this request that I have been directed to submit the accompanying papers. Lieutenant-Colonel Ouchterlony is an able Officer, and one of long standing in the Department, and considering that the full salary of the appointment of Deputy Chief Engineer, Northern Circle, is available, I am desired to request that his appeal may receive the favorable consideration of the Right Honorable the Governor General in Council.

No. 126. Read the following Proceedings of the Madras Government in the Financial Department, dated 26th April 1862, No. 314.

Communicating Resolution of the Government of India on the question of the salary of Mr. A. G. Crommelin, an Uncovenanted Officer of the Public Works Department, for the time intervening between the expiration of his leave and the assumption of his duties. (Vide Financial Proceedings, 26th April 1862, Nos. 93-94.)

No. 127. ORDER THEREON, 5th May 1862, No. 954.

Communicated to the Chief Engineer and to the Deputy Chief Engineers Northern, Southern, and Central Circles, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 128. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 14th March 1862, No. 211/Kr 67.

Read the following letter from Major J. C. ANDERSON, District Engineer Kistna, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Bezwada, 27th February 1862, No. 213.

SIR,

1. Referring to your Memorandum No. 9,699, dated 22nd ultimo, and Proceedings of Government as per margin on the subject of Dispensaries, I have the honor to inform you that the amount referred to in paragraph 21, Rupees 1,027-14-6, sanctioned for disbursement by Government, has been expended in completing the Civil Dispensary at Guntoor. I inspected the building in April last, and it was then nearly completed, but it was not thrown open for the reception of patients till the beginning of October.

No. 983, 9th July 1861.

2. As reported in my letter No. 4, dated 6th May 1861, the amount sanctioned for the work, would not allow of new out-houses being constructed, as originally designed, and as Government had declined to allow any further outlay, I had no alternative but to leave the work so far incomplete. Very lately, however,* the Collector informed me that 413 Rupees, collected by private contributions, remained in his hands, and with this sum I propose to construct a dead house, which the Civil Surgeon in charge has reported to be urgently required, and a necessary.

* 27th January 1862.

3. As regards the proposed Dispensary at Masulipatam, estimated to cost Rupees 8,300, of which Rupees 5,279, including 300 Rupees for the purchase of a piece of ground were to be defrayed by Government and the remainder by private contributions, and which was ordered to be entered in the Budget of 1860-61, I beg to intimate that the order appears to have been lost sight of. The work was not entered in the Budget Statement of 1860-61 or of 1861-62 and I also omitted it inadvertently in preparing the Statement for 1862-63.

4. Annexed is a copy of a letter addressed to me by the Collector, informing me that he sees no reason why the work should not be proceeded with at once. I propose, therefore, to take measures to collect materials and to carry on the work in the first instance as far as the private contributions will admit of, and subsequently by means of Departmental funds, as they become available without detriment to the progress of other works.

From G. THORNHILL, Esq., Collector of Kistna District, to Major J. C. ANDERSON, District Engineer Kistna Division, Bezwada, dated Rapully, 17th February 1862, No. 32.

SIR,

In reply to your letter of the 7th instant, No. 1,267, I have the honor to state that there is no objection to the work being proceeded with as far as collection of materials is concerned. There has been difficulty about selecting a site, and it was at one time contemplated to purchase the building now occupied and repair it; but Lieutenant Hasted having given it as his opinion that, although capable of repair, it could not be made equal to a new building, I think that notion had better be abandoned, I will at once communicate with Dr. Robertson regarding the site.

(True Copy.)

(Signed) J. C. ANDERSON, Major,
District Engineer, Kistna Division.

Submitted to Government for information with reference to their Order No. 983 of 9th July 1861, paragraphs 21 and 24, calling for information as to the proceedings instituted with a view to the completion of the Dispensary at Guntoor for which the sum of

1 Letter from District Engineer Kistna, No. 213, dated 27th February 1862 with one enclosure.

Rupees 1,027-14-6 was sanctioned on the 29*th August* 1860, *No.* 1,280, and to the erection of a similar building at Masulipatam, sanctioned 27*th July* 1859, *No.* 1,155.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 129. ORDER THEREON, 5th May 1862, No. 955.

1. Ordered to be communicated to the Public Department, with reference to paragraphs 21 and 24 of Proceedings in that Department, dated 9th July 1861, No. 983.

2. Adverting to paragraph 3 of Major Anderson's letter, the Government think it necessary to ascertain whether the estimate of 8,300 Rupees, framed apparently so long ago as February 1858,* for the erection of a Civil Dispensary at Masulipatam, would now be sufficient for the purpose.

3. They also wish to be informed whether the balance† of subscriptions by the inhabitants of Masulipatam, which was expected to be realized by the 1st September 1859, was so realized.

* *Vide* Chief Engineer's letter, 25th March 1858, No. 8,448.
In Public Works Proceedings, 20th April 1858, No. 730.

† Rupees 1,421-4-0.
Proceedings of Government 27th July 1859, No. 1,155, paragraph 1.

4. The Government observe, by the Collector's letter accompanying the above, that the site of the proposed Dispensary has not yet been decided on notwithstanding that in their order above quoted, paragraph 3, the then Collector was directed *to* at *once* take the necessary steps to secure the ground which had been selected as suitable, and which was then procurable for Rupees 300.

5. The Board of Revenue will call for and submit explanation on this point.

6. The omission to provide in the Budget of 1860-61 and subsequent Budgets for the portion‡ of the cost to be defrayed by Government also requires explanation on the part of the Chief Engineer.

‡ Rupees 5,279.

7. In the absence of any provision in the Budget, and pending the receipt of the information now called for, the proposition of the District Engineer to collect materials and proceed with the work as far as the private subscriptions will admit of, and then to continue it out of such Government funds at his disposal as may be available for the purpose, must be held in abeyance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 130. Read the following List from the Chief Engineer :—

List of Orders of Government of more than three months standing remaining unanswered on the 30th September 1861. } (Here enter 28th March 1862, No. 12,080.)

No. 131. ORDER THEREON, 5th May 1862, No. 956.

1. The above list for the half year ending 31st December 1861, contains the Orders of Government of more than three months standing remaining unanswered in the Offices of the Chief Engineer, Deputy Chief Engineers of Northern, Southern and Central Circles, and the Officer in charge of the Account and Audit Departments of the Central Office of Public Works.

2. The Government observe that the two orders noted in the margin, which have not been replied to, are omitted from the list. The Deputy Chief Engineer of Northern Circle will include them in his next list.

No. 2,172, dated 20th October 1860.— To submit an Estimate of the line from Vizagapatam by Harris Valley to Jeypore.
No. 799, dated 20th April 1861.—To give detailed information regarding the exploration of the upper Godavery.

3. The Chief Engineer solicits permission to omit the following Orders for the reasons stated opposite to each :—

Revenue No. 776, dated 8th June 1858.—Enquiring whether the Map of the Geological Survey of the Neilgherries can be executed in the Lithographic Department of the Central Office without additional cost.	From a report published by Mr. Blanford the Survey appears to have been lithographed at Calcutta.
P. W. No. 956, dated 21st April 1859. Ordering the entry of the above order in the List.	
No. 91, dated 12th January 1861.— To submit with observations Colonel Lawford's report on the introduction into this Presidency of the Bengal system of Account and Audit.	In consequence of the non-submission of the report by Colonel Lawford.

4. The first one being an order in the Revenue Department the subject will be referred to that Department. Sanction is granted for omitting the other order from future lists.

5. The Deputy Chief Engineer, Central Circle, solicits permission to omit the following Orders, for the reasons stated opposite to each :—

No. 653, dated 12th April 1858.— Desires to be informed whether the levels of the Tumbuddra project are being taken at the instance of Colonel A. Cotton.	This subject was referred to Colonel A Cotton, and no report was received up to his embarkation.
No: 1,694, dated 13th July 1859. No. 2,843, dated 7th December 1859.—Calls for plans and estimates for the accommodation of Married Soldiers of the Artillery at the Mount.	The plan and estimates were forwarded to the Quarter Master General, who decided that temporary quarters of the kind sanctioned by the Government of India in Proceedings dated 22nd March 1861, No. 582, are sufficient for the Mount.
No. 2,441, dated 13th October 1859.—Requests to submit plans and estimates for a Place of Arms, &c., at Beloor Maidan, near Mangalore.	In consequence of the abandonment of the Barracks at that Station. *Vide* Proceedings of Government dated 14th March 1862, No. 445.
No. 2,497, dated 4th December 1860.—To ascertain when Mr. Pugh's gardens is to be sold.	For reasons stated in letter to Government dated 29th October 1861, No. 6,513.

6. Permission is granted for the omission of the first and the last Orders. The other three being Orders in the Military Department it will be ascertained from that Department whether there is any objection to the Deputy Chief Engineer's proposition.

No. 2,072, 7th October 1858.
No. 2,663, 8th December ,,
No. 854, 12th April 1859.
No. 1,283, 18th June 1860.
No. 2,250, 1st November ,,
No. 130, 18th January 1861.
No. 155 22nd do. ,,
No. 214, 31st do. ,,
No. 376, 26th February ,,
No. 277, 9th do. ,,
No. 1,051, 5th June ,,

7. Owing to the transfer of North Canara to the Bombay Presidency the Government sanction the omission of the Orders noted in the margin from future lists.

8. The list is submitted this time four months after it is due. It is hoped that the next list will be before Government in due tiem.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Proceedings of the Madras Government, Public Works Department, 5th May 1862.

No. 132. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 29th April 1862, No. 13,034 :—

SIR,

1 Letter from Mr. Kennedy, dated 3rd April 1862, No. 2,482, with bill
1 Do. Civil Paymaster, dated 15th April 1862, No. 152.

1. I have the honor to submit, for the orders of Government, letters as per margin relative to a claim made by Mr. R. Kennedy, 1st Assistant District Engineer, to the moiety of salary of District Engineer in addition to the full salary of his substantive appointment, during the time he held charge of the Madras District in the month of March 1862.

"Fort Saint George Gazette"—March 1862, page 449.

2. Mr. Kennedy relieved Mr. Dopping of the charge of the Madras District on the 12th March 1862, and the latter received charge of the North Arcot District from Captain Prendergast on the 15th idem, and as Captain F. J. Moberly, appointed to act as District Engineer, Madras, only delivered over charge of his own District, South Canara on the 31st; I informed the Civil Paymaster that it appeared to me that a moiety of the salary of District Engineer was available for payment to Mr. Kennedy either from the 13th or 16th to the 31st March 1862, but that the payment of such an allowance for the month of April, would, I conclude, be an extra expense to the State, because Captain F. J. Moberly became entitled to the salary of the Madras District from the 1st of the same month, and Lieutenant-Colonel Walker to that of South Canara from the 6th idem.

3. In reply, the Civil Paymaster informs me that "if the conditions alluded to in the Proceedings of Government No. 482, dated 19th March 1862, paragraph 2, have been complied with, and Mr. Kennedy has retained charge of his own range besides conducting the duties of District Engineer, there will be no objection to his drawing the salary he claims until relieved by Captain F. J. Moberly upon his position being recognized by Government," and this accordingly I have the honor to request may be done, as Mr. Kennedy necessarily performed both his own duties, viz., charge of the Eastern Coast Canal, &c., and those of District Engineer until the 17th instant, when he delivered over charge of the District to Captain F. J. Moberly as there was no one to relieve him of the Canal.

No. 133. ORDER THEREON, 5th May 1862, No. 957.

Before passing orders on this letter, the Government request that the Civil Paymaster will report whether funds are available for the payment to Mr. Kennedy of a moiety of the salary of District Engineer in addition to the full salary of his substantive appointment for the entire period during which he held charge of the Madras District.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 134. Read the following Proceedings of the Madras Government in the Military Department, dated 1st May 1862, No. 1,584.

Communicating letter from the Controller of Military Finance regarding certain Timber now lying on the Beach and procured by the Commissariat Department for the use of the Gun Carriage Manufactory, with a desire to turn to account so much of it as may be found of use to the Department. (Vide Military Proceedings, 1st May 1862, Nos. 7 @ 10.)

No. 135. ORDER THEREON, 5th May 1862, No. 958.

Communicated to the Acting Deputy Chief Engineer, Central Circle, who will be good enough to expedite his reply to the Proceedings of Government No. 739, dated 11th April 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 136. Read the following Proceedings of the Madras Government in the Educational Department, dated 2nd May 1862, No. 121.

Sanctioning an additional sum of Rupees 125 to complete the Cookroom, Wash house, &c., for the Military Students attached to the Civil Engineering College. } (Vide Educational Proceedings 2nd May 1862, Nos. 3-4.)

No. 137. ORDER THEREON, 6th May 1862, No. 959.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 138. Read the following Proceedings of the Madras Government in the Marine Department, dated 30th April 1862, No. 118.

Approving of the arrangements proposed for signalling purposes at Paumben in lieu of constructing a Flag Staff, and sanctioning the estimate for the same. } (Vide Marine Proceedings, 30th April 1862, Nos. 59-60.)

No. 139. ORDER THEREON, 6th May 1862, No. 960.

1. Communicated to the Deputy Chief Engineer, Southern Circle, for information and guidance.

2. The estimate, viz., Rupees 195, will be met from the General Funds of the District.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 140. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 21st April 1862, No. 274:—

SIR,

1.[1] I deeply regret to have to report the occurrence of an accident in the Quarries near the Nellore Anicut, attended with loss of life to one individual and serious injury to another, on the 7th instant.

1 Original letter, No. 727, dated 12th April 1862.

2. The letter of the District Engineer communicating it is submitted herewith for the information of Government, who will observe that the accident in question was caused entirely by the folly, amounting to infatuation, of the unfortunate sufferers in attempting to bore out an unexploded blast with iron tools, in quartz rock, without keeping the tamping drenched with water.

3. Further particulars will be laid before Government as soon as received; and in the meantime I may remark that the Indent for Brickford's Fuze, alluded to by the District Engineer in paragraph 4 of the accompanying letter, was duly submitted to the Inspector General of Ordnance and Magazines on the 25th March, and has been received back this day, passed for issue on payment. The Fuze will therefore be drawn and despatched to Nellore as soon as the hands return to this Office after the current holydays.

No. 141. ORDER THEREON, 6th May 1862, No. 961.

1. The Government learn with regret of the serious accidents which happened on the 7th April 1862 to two of the workmen employed at the Pennár Anicut quarries, in the Nellore District, resulting in one case in loss of life.

2. The Government will await the receipt of the further report promised by the District Engineer regarding the deceased workman, and they desire at the same time to be informed of the result of the serious injuries sustained by Mr. Neely.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 142. Read the following letter from Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 19th April 1862, No. 12,839:—

SIR,

* Nos. 2,492 and 245, dated 31st December 1861, and 18th February 1862.

2 Letters from District Engineer, Nos. 266 and 299, dated 13th February and 31st March 1862.
1 Specification.
1 Plan.
1 Abstract estimate, Rupees 2,810.
1 Do. do. " 1,980.

1. With reference to the Proceedings of Madras Government marginally noted,* I have the honor to submit a plan, specification and estimate, amounting to Rupees 2,810, for constructing a brick arch bridge across the Oopaur river, on the road from Tuticorin to the new Salt Pans at Karapâdu, in the District of Tinnevelly.

2. Provision is made in the estimate for constructing a bridge of three arches each eighteen feet span, giving 353 square feet of water-way. The foundations to be either of hard sand stone, or coral stone in chunam, sunk six feet, resting on stiff clay. The arches and spandrils to be of brick in chunam and plastered, and the remainder of the superstructure of either coral stone or hard sand stone, also in chunam, and plastered. The parapets are to have no interior cornice, and the road way 12½ feet in breadth over the bridge, as well as the approaches to it, to be made horizontal.

3. The rate allowed in the present estimate of Rupees 2,810 for brick work is much higher than that ordinarily prevailing in the District, because suitable bricks for arch work cannot be procured within fourteen miles from the site of the bridge. The rates for plastering and wood work are also high; but not more than absolutely necessary.

† No. 299, dated 31st March 1862.

4. I agree with Captain Payne that "a Platform† bridge "for the site in question is preferable in every way to an arched" one.

5. Under these circumstances, I request that you will be good enough to obtain the early sanction of Government to the revised estimate of Rupees 1,980, submitted with Endorsement No. 10,513, dated 13th February last, the cost to be defrayed from the General Funds allotted to the District as already sanctioned by Government in their Proceedings No. 2,257, dated 9th December 1861.

No. 143. ORDER THEREON, 6th May 1862, No. 962.

Under the circumstances mentioned in the foregoing letter the Government sanction the estimate amounting to Rupees 1,980 for a Platform Bridge across the Oopaur River in the Tinnevelly District, funds for the work being provided in the manner proposed in paragraph 5.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 144. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 17th April 1862, No. 111:—

SIR,

* Letter No. 115, dated 5th April 1862.

1. The Agent has requested* me to submit for the sanction of Government the accompanying plans and estimate amounting in aggregate to Rupees 600, for surrounding the enclosure of the Hospital at Kurnool with a wall and erecting a small building for the accommodation of the Dresser, who it is represented cannot obtain one in the town sufficiently near the Hospital.

2. The building is suitable and inexpensive, and the rates in the estimate sufficient.

No. 145. ORDER THEREON, 6th May 1862, No. 963.

The estimate amounting to Rupees 600 submitted with the foregoing letter is sanctioned.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 146. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 16th April 1862, No. 269/G 157:—

SIR,

1 Letter from District Engineer, Godavery, No. 1,542, dated 7th April 1862.
1 Estimate.
1 Specification
1 Plan.

1. I have the honor to submit for the consideration of Government an estimate amounting to Rupees 1,500, being the amount found necessary to complete certain repairs to the Kadiyapoo-lunka Lock in the Godavery District, which were sanctioned by Government under dates 19th November 1861 and 1st February 1862, to the extent of Rupees 2,000.

2. The chief cause for this supplement to the original estimate is the unlooked for quickness of the springs which have been cut in clearing out the foundations of the work in question, and the necessity which has arisen for giving considerably greater solidity to the new under stratum. Anticipating also that the measure of raising the Godavery Anicut would be eventually sanctioned Major Stoddard has taken upon himself to raise the walls and gates of the Lock in accordance; and though strictly speaking this step was contrary to rule, I think, under the circumstances, it was justifiable. The additional masonry thus required of course tends to swell the amount of the supplemental estimate.

3. The amount in question Rupees 1,500 can be allotted from the General Repair Fund of the District.

No. 147. ORDER THEREON, 6th May 1862, No. 964.

1. Under the circumstances stated, the Government sanction the estimate now submitted amounting to Rupees 1,500, for repairing the Lock at Kadiyapoo Lunka in the Godavery District.

2. The funds for this work will be provided as stated in paragraph 3.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 148. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th April 1862, No. 259/K 64:—

SIR,

1 letter from Mr. G. Conran, dated 5th April 1862.

1. As the accompanying letter from Mr. G. Conran may be viewed in the light of an appeal from my decision in his case, and as, at all events, its disposal now may save Government a future re-agitation of the question, I am induced to submit it herewith in continuation of my letter No. 233, dated 2nd April 1862.

2. Whether the circumstances of Mr. Conran's case warrant leniency, Government, assisted by the counsel of the Chief Engineer, will be best able to judge.

3. Looking to the sweeping accusations levelled by the late Assistant Supervisor I must confess I should be very glad if the occasion might serve to induce a consideration of the entire question of the rules affecting the travelling allowances of the Officers and Subordinates of the Department Public Works, the operation of which, as at present constituted, I cannot but consider demoralizing and prejudicial.

4. I am quite sure all the earnest workers of the Department would gladly hail the appearance of an order establishing a fixed rate per mensem on this account in lieu of the present, in my humble judgment, most inexpedient and inoperative sliding scale of allowance: and I am equally confident the public interests would be thereby as well served as, if not better served than, they are at present; and at less cost.

No. 149. ORDER THEREON, 6th May 1862, No. 965.

The Government understand from the foregoing and the papers accompanying that Mr. Conran, late Assistant Supervisor in Kurnool, was dismissed the service chiefly for falsifying his Inspection Report, and that in his defence he urges that the practice is a general one throughout the Department. The Government resolve therefore to call upon the Chief Engineer to enquire into the truth of Mr. Conran's statement, upon the result of which enquiry they will be prepared to judge of his case, as well as to determine whether any reform is needed in the Department in general.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 150. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 2nd April 1862, No. 233 K 64:—

SIR,

With reference to Transfer Memorandum No. 242, dated 29th ultimo, covering a Petition from Mr. G. Conran, late Assistant Supervisor, Department Public Works, Kurnool, I have the honor to submit herewith for information a draft of a letter from this Office to the District Engineer of that Province, by which it will be seen that it is unnecessary to entertain the question raised by Mr. Conran as to his claim to promotion, since I have been under the painful necessity of directing his dismissal from public employ.

1 Draft letter No. 208, dated 25th March 1862.
1 Petition from Mr. Conran, dated 21st March 1862, with seven enclosures.
1 Packet of papers containing thirty-four enclosures.
1 Packet of papers enclosed.

No. 151. ORDER THEREON, 6th May 1862, No. 966.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 152. Read the following Proceedings of the Madras Government in the Military Department, dated 28th April 1862, No. 1,526.

Communicating letter from the Deputy Chief Engineer, Central Circle, submitting an estimate for five years of the cost of Police Guard for the water Cistern on the Esplanade. (Vide Military Proceedings, 28th April 1862, Nos. 551-552.)

No. 153. ORDER THEREON, 7th May 1862, No. 967.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 154. Read the following Proceedings of the Madras Government in the Revenue Department, dated 29th April 1862, No. 923.

Communicating letter from the Government of India transmitting copy of the Despatches from the Home Government relative to the transfer of North Canara from Madras to Bombay Presidency, and acquainting that the transfer had taken effect from the 16th April 1862. } (Vide Revenue Proceedings, 29th April 1862, Nos. 409-410.)

No. 155. ORDER THEREON, 7th May 1862, No. 968.

Communicated to the Chief Engineer and Acting Deputy Chief Engineer, Central Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 156. Read the following Proceedings of the Madras Government in the Pension Department:—

Forwarding with certain instructions copy of the Form of Application for Pension. } (Here enter 26th April 1862, No. 137.),

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No. 157. ORDER THEREON, 7th May 1862, No. 969.

Communicated to the Chief Engineer and Deputy Chief Engineer, Southern Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 158. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government Public Works Department, dated 6th March 1862, No. 87:—

SIR,

1. The accompanying letter* was forwarded to me by the Agent,† soon after my return from Calcutta, but concluding that it had been already meanwhile submitted to Government, I did not consider it necessary to forward it myself, finding however that it has not yet been laid before them, I beg now to supply the omission.

* No. 54 of 29th November 1861.
† No. 524 of 9th December, 1861.

2. The Chief Engineer first furnishes replies to the objections made against the proposed mode of constructing the Canal, and then supplies reasons for requesting a re-consideration of the prohibition against submitting the estimates for the Nellore Sections.

3. In the first he represents that the loss by evaporation occasioned by the tanks will be more than compensated for by the drainage from the country between the months of May and December, and by the superabundant waters of the river, while that for the remaining months will have to be provided for in the Reservoirs, with which it is intended to keep up the requisite supply for the irrigation and navigation, and that if the sites in Mysore are made available, the expense would be small to provide the additional 40 millions cubic yards which he calculates would be required.

4. That as respects the submerging of the lands, whereas 4,000 acres may be thrown out of cultivation 60,000 acres will be irrigated in the same and neighbouring villages, an extent which will draw off nearly all the efforts of the agriculturists.

5. On the second point the Chief Engineer urges that he has shown that the data on which his estimates are founded are satisfactorily proved by the works now in progress, and that to defer the commencement of the Nellore sections, is to defer proportionately the eventual return from those works.

6. In further justification of his estimates he submits a general plan and estimate of a Lock of 20 feet lift for the Kundár Valley, adapted to a site where there is a fall of 30 feet in a mile. The design, he states, shows a maximum expense throughout. The Chief Engineer's estimate amounts to Rupees 15,200 or about Rupees 760 per foot of lift, and at this rate the total Lockage from the water shed to the Canal, viz., 700 feet, would cost at 800 Rupees per foot a sum of 5,60,000 instead of 18 lacs, the sum set down in Major Orr's estimate which the Government adopted.

7. I have carefully examined the design and estimate and find the former suitable, but it will be probably safer to increase the rates. Still however the cost falls within that originally allowed by the Chief Engineer, viz., Rupees 1,000 per foot of lift, a rate which I am of opinion will be found ample.

The cost of the Lock will be 17,200 or 860 per foot of lift.

No. 159. ORDER THEREON, 7th May 1862, No. 970.

1. The letter from the Chief Engineer now submitted, it appears should have been forwarded by the Agent during the Consulting Engineer's absence, as it contains explanation on points referred to in the Proceedings of Government 16th November 1861, No. 2,131.

2. As these have since been disposed* of it is not necessary to re-consider them. With respect to the plans for the Nellore Sections the Government have already† acceded to the course recommended in the Consulting Engineer's letter of the 6th March 1862, No. 86.

* Pro. No. 2,369, dated 24th Dec. 1861. Do. No. 459, dated 17th March 1862.

† No 673, dated 4th April 1862.

3. The Consulting Engineer points out that the estimate for the first flight of Lock of 20 feet lift in the descent into the Kundár Valley falls within the Chief Engineer's original rough estimate of 1,000 Rupees per foot, and the Government will be glad to find that the latter's anticipation of their average cost throughout the line proves correct.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 160. Read the following letter from F. LUSHINGTON, Esq., Acting Accountant General, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Fort Saint George, 19th March 1862, No. 346 :—

SIR,

1. With reference to paragraph 4 of my letter of 28th November last, No. 229, I have the honor to submit a statement, in lieu of those marked C and D forwarded to you with my letter of 17th September 1860, No. 196, which exhibits the unpassed expenditure up to 30th April 1856, out of the advances made by the Sub-Treasurer and Paymasters to Officers in charge of Public Works, the amount of passed Bills received from the Controller of Military Finance (formerly Military Auditor General) up to date inclusive of cash recoveries, and the balance for which Bills have yet to be received.

2. In my letter above alluded to, I stated that the accounts of the late Superintending Engineers at the Presidency and the Hyderabad Subsidiary Force would soon be closed, and I have now to report that, with reference to the former Officer, there is a small balance of Rupees 1,568-6-3 to be accounted for, and for which it hasbeen represented to me by Major Rawlins, in charge of the Audit and Account Departments, in his letter of 5th February 1862,

that Bills have been passed. These Bills have not, however, as yet been received by this Office from the Controller of Military Finance, to whom they are stated to have been sent. With regard to the account of the latter Officer, I beg to state, that the passed Bills exceed the amount written off in the books of this Office, and which the Chief Engineer was requested, under date 17th December last, to account for. I have had no reply from him as yet to that reference.

3. In the Statement furnished on the 17th September 1860, it was shown that the accounts of the two Officers in the margin had been closed, but on the re-examination of their accounts, it has been discovered that they have yet to account for balances. With respect to the balance outstanding on account of Captain Snow, there are Bills however for Rupees 479-15-0 regarding which a reference was made to the Chief Engineer on the 30th April last, as it was then assumed that this Officer's account had been adjuste d and this assumption it has been now ascertained was not correct.

Major J. Maitland, Superintendent of Gun Carriage Manufactory.
Captain W. S. Snow, Fort Adjutant in charge of Engineers, Department at Cannanore.

4. I have received no Return since I last addressed Government on account of unpassed expenditure in the Revenue Department.

No. 161. ORDER THEREON, 7th May 1862, No. 971.

1. This letter gives cover to the revised Statement of unpassed expenditure up to 30th April 1856 on Military Works, which the Accountant General in paragraph 4 of his letter dated 28th November 1861, No. 229, promised to submit at the close of the last quarter of 1861 in lieu of the one forwarded on the 17th September 1860.

2. The following table shows the difference between the two Statements abovementioned : —

Items.	Amount of unpassed expenditure up to 30th April 1856.	Amount of Bills passed.	Balance to be accounted for.
	RS.	RS.	RS.
According to the Statements, 27th Sept. 1860... ...	20,83,348	16,11,716	4,71,632
According to the present Statement....	20,83,348	17,46,015	3,37,333
Increase.....	......	1,34,299	......
Decrease.....	......	......	1,34,299

3. No explanation is afforded with regard to the difference between the amounts shown as adjusted in the Statements submitted by the Accountant General on the above dates, and he is accordingly requested to supply the omission.

4. At present it is not clear whether the Statement now sent is not only in lieu of but also in continuation of that submitted on the 27th September 1860.

5. With regard to the promise to close the accounts of the late Superintending Engineers at the Presidency and at Hyderabad Subsidiary Force at an early date, the Accountant General, in paragraph 2, states that the Bills passed by the Officer in charge of the Audit and Account Departments of the Central Office on account of the sums standing unadjusted against the former Officer have not yet been received. The Controller of Military Finance is requested to forward all such Bills to the Accountant General with as little delay as practicable. As respects the accounts of the Superintending Engineer, Hyderabad Subsidiary Force, reference is stated to have been made to the Chief Engineer in consequence of the sums passed by that Officer being in excess

of those actually written off the books. The Officer in charge of the Audit and Account Departments of the Central Office will be requested to report, for the information of Government, the cause of the excess and the reason why no reply has yet been furnished to the Accountant General

6. Paragraph 5 of the above letter will be referred to the Civil Paymaster for report as to the cause of the non-submission to the Accountant General of the report on the Statement of the unpassed expenditure of the Revenue Department.

7. It is now nearly one year since a temporary establishment was sanctioned to aid the Audit Department of the Central Office in adjusting the unpassed expenditure of the Public Works Department. Colonel Rundall will be requested to submit a Statement showing the progress made in this work.

8. From the Accountant General's Statement it would appear that in the Military Audit alone a sum of Rupees 3,37,833 still remain to be adjusted.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 162. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 19th April 1862, No. 12,861 :—

SIR,

1 Letter to Dr. Paul, dated 15th February 1862, No. 10,597.
1 Do. from do. dated 17th do. No. 9.
1 Do. to Lieut.-Colonel Carpendale, Lieutenant Tulloch and Mr. Kennedy, dated 20th February 1862, No. 10,789.
1 Do. to Police Magistrate, Vepery, dated 21st February 1862, No. 10,843.
1 Do. from Police Magistrate, No. 11, dated 21st February 1862.
1 Proceedings of Committee of Enquiry, dated 24th February 1862, with copy of "Examiner" Newspaper, Extract from Proceedings Magistrate's Book, Town Police, Memorandum of days absence from duty, and Memorandum of days at work.
1 Letter to Adjutant General of the Army, dated 6th March 1862, No. 11,162.
1 Letter from Deputy Adjutant General of the Army, dated 27th March 1862, with one letter and Medical Certificate.
1 Letter from Lieutenant-Colonel Boileau, with accompaniment, dated 26th June 1861.
1 Copy of Covenant.
1 Letter to Government Solicitor, dated 8th April 1862, No. 12,406.
1 Memorandum, dated 8th April 1862.
1 Letter from Government Solicitor, dated 14th April 1862, No. 190.
1 Copy of Extract Minutes of Consultation, dated 18th November 1858, No. 2,412.

1. I have the honor to submit for the Orders of Government papers as per margin, on the subject of the conduct of Mr. James Nowland, 1st Class Boiler maker of the Indian Navy, at present employed under my orders at the Abercrombie's Battery.

2. From the accompanying Memorandum of Mr. Nowland's career in India from the date of his arrival in January 1859, it will be seen that in consequence of the Surgeon at the General Hospital having informed me that Mr. Nowland had by his own intemperance so impaired his health as to be unfit for effective service, I considered it desirable, in February last, to relieve him from duty, and to appoint a Committee to enquire into and report upon his character and conduct. The report of this Committee, together with that of a Board of Medical Officers by whom Mr. Nowland was subsequently, at my request, examined as to his physical fitness for continued employment, I forwarded to the Government Solicitor for the purpose of ascertaining whether Mr. Nowland could, under the opinion therein given, be summarily dismissed for intemperance under the terms of his Covenant, and that Officer in reply informs me that he is unable from the evidence taken in the case, to bring home satisfactory to Mr. Nowland any specific act of intemperance, or other misconduct warranting his dismissal.

3. Under these circumstances I beg to recommend that twelve months' notice should be given to Mr. Nowland in accordance with the terms of his Covenant, as his services are no longer required in this Presidency, and if they were, it is not probable, under the opinion expressed by the Medical Committee, that they would re-pay Government the expense they are at for his monthly salary, &c., as per margin.

	RS.
Pay	150
Rations	50
Total...	200 per month.

4. If it had not been for the decided opinion given by the Medical Committee, I would have recommended Mr. Nowland's transfer to Bombay, where his knowledge of and practical skill in Boiler making could be turned

to better account than it can in this Presidency, but the Bombay Government will hardly be disposed to take him into their employ, although he was originally engaged for that Presidency, after he has been pronounced "unfit for any further service."

No. 163. ORDER THEREON, 7th May 1862, No. 972.

1. Under the circumstances brought to notice in the foregoing letter the Government authorize the Chief Engineer to give Mr. Mechanical Engineer Nowland 12 months' notice in accordance with the terms of his Covenant.

2. The Chief Engineer will consult the Government Solicitor as to the course to be adopted in pursuance of these orders.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 164. Read the following letter from Lieutenant-Colonel A. G. GOODWYN, Under Secretary to the Government of India, Public Works Department, to the Secretary to the Government of Fort Saint George, dated the 11th April 1862, No. 1,383:—

SIR,

I am directed to inform you that your letter No. 412, with enclosures, submitting a proposal for the construction of a road either from Kontaloo to Kurcholy in the Ganjam District, or from Kontaloo to Bessimpoor viâ Nyaghur, has been forwarded to the Government of Bengal for consideration and report.

No. 165. ORDER THEREON, 7th May 1862, No. 973.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 166. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 30th April 1862, No. 13,087 :—

SIR,

1. With reference to the Proceedings of Government, dated 26th March 1862, No. 569, I have the honor to submit for their information the accompanying letter[1] from the Superintendent of Marine, reporting that at present there is no opportunity of bringing back to this Presidency the machinery lying at Beitkál, and that as the south-west monsoon is near at hand, it is not likely that any will occur for some months.

[1] Letter dated 23rd April 1862, No. 1,253.

2. I have written to the District Engineers of Malabar and South Canara to ascertain whether any part of the machinery in question is required in their Districts, and beg to suggest that the Bombay Government be advised of the inability of this Government to remove the articles at present as requested by them.

From J. J. FRANKLIN, Esq., Superintendent of Marine, to the Chief Engineer, Public Works Department, dated Madras, 23rd April 1862, No. 1,253.

SIR,

With reference to the Proceedings of Government of the 26th ultimo, No. 569, Public Works Department, on the subject of the removal from Beitkál of certain stores rejected by the

Bombay authorities as not required, I have the honor to inform you that there is at present no opportunity of bringing them back to Madras; and, moreover, as the south-west monsoon is near at hand, it is not likely any will occur for some months.

No. 167. ORDER THEREON, 7th May 1862, No. 974.

Ordered that the following letter be despatched to the Acting Secretary to the Government of Bombay:—

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 168. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, Fort Saint George, to the Acting Secretary to the Government of Bombay, dated 7th May 1862, No. 975.

SIR,

1 Letter from Chief Engineer.
1 Do. from Superintendent of Marine.

No. 13,087, dated 30th April 1862.

1. With reference to my letter No. 570, dated 26th March 1862, I am desired by the Honorable the Governor in Council to forward copy of a letter marginally noted from the Chief Engineer of this Presidency, enclosing one from the Superintendent of Marine, reporting that an opportunity of bringing back to Madras the machinery lying at Beitkál is not likely to occur for some months to come owing to the approaching south-west monsoon.

2. I am further to request that the Bombay Government will be good enough to issue instructions to their Officers in North Canara to take due care of the machinery in question until an opportunity offers for its removal to this Presidency.

No. 169. Read the following Endorsement of the Acting Deputy Chief Engineer, Central Circle, dated Chepauk, 17th April 1862, No. 12,784.

Read the following letter from Lieutenant-Colonel G. W. WALKER, District Engineer, North Canara, to the Deputy Chief Engineer, Central Circle, dated Camp Yellapoor, 5th April 1862, No. 235:—

SIR,

I have the honor to report that I was this day relieved from duty with the Bombay Department of Public Works and my services re-placed at the disposal of the Madras Government.

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1 Original letter No. 235, dated 5th April 1862.

Submitted to Government with reference to Proceedings, No. 285, dated 22nd February 1862.

(Signed) J. CARPENDALE, Lieut.-Colonel,
Acting Deputy Chief Engineer, Central Circle.

No. 170. ORDER THEREON, 7th April 1862, No. 976.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 171. Read the following Proceedings of the Madras Government in the Revenue Department, dated 29th April 1862, No. 916.

Referring Proceedings of the Court of Wards concurring with the Deputy Chief Engineer, Northern Circle, as to the advisability of placing Rupees 1,000 at the disposal of Mr. Forbes, for clearing a trace between the Mahindragiri Range of Hills and the High lands of Sourah's country, and promising to supply funds for the portion of the line in the Kimedy Estate. } (Vide Revenue Procedings, 29th April 1862, Nos. 391-392.)

No. 172. ORDER THEREON, 7th May 1862, No. 977.

Communicated to the Deputy Chief Engineer, Northern Circle. The sum of Rupees 1,000 will be provided from the Reserve Fund of the current year. The Court of Wards, it is observed, s prepared to supply funds for that portion of the line which is in the limits of Purlah Kimedy Zamíndári.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 173. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 29th April 1862, No. 118:—

SIR,

* No. 440. 1. In the accompanying letter* from the Agent, dated 7th October 1861, he has forwarded copy of one from the Chief Engineer, requesting that a sum of Rupees, 10,000 may be placed at his disposal, to serve as capital, for the provision of materials and labor on account of manufacture of stores in the Central Workshop at Kurnool. On its receipt I requested the Agent to explain the principle on which operations in the Workshop were to be carried on, and the system of accounts to be adopted in connexion with it.

2. In reply, the Agent states in the accompanying letter, No. 102, dated 28th ultimo, that the system he proposes to carry out, is, that " all expenses incurred in the manufacture of stores " will be placed to the debit of Stores Manufactured, and when an article is completed, the value " thereof will be debited to Stores, Work or other heads, as the case may be, and the head Stores " Manufactured, credited with a like amount." He has also forwarded the enclosed Forms, to be used for ascertaining the value of out-turns, which Forms, he adds, will be all that are necessary, to enable him to keep a correct account of the Workshop's proceedings.

† By Rule 42. 3. From the Rules and Forms of the general scheme of accounts, sanctioned in the Proceedings of Government, dated 12th instant, No. 753, it will be seen† that the principle laid down therein, as to the mode of recording and accounting for expenditure on manufacture of stores, is exactly the same as that proposed to be adopted by the Agent, and in Rule 57 due provision is made for the Consulting Engineer being furnished by the Agent with a Quarterly Return (as per Form R), showing the amount expended, the value of articles turned out, and of the amount remaining to be accounted for.

4. I therefore beg to recommend that the sanction of Government may be given to place the sum of Rupees 10,009 at the Agent's disposal, as a standing advance, to be accounted for as above described.

No. 174. ORDER THEREON, 7th April 1862, No. 978.

On the recommendation of the Consulting Engineer, His Excellency the Governor in Council sanctions a sum of Rupees 10,000 being placed at the Agent's disposal as a standing advance, for the provision of materials and labor on account of manufacture of stores in the Central Workshop at Kurnool, to be accounted for in the manner described in paragraph 3.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 175. Proceedings of the Madras Government, dated 7th May 1862, No. 979:—

Read again the Endorsement of the Officiating Under Secretary to the Government of India, dated 9th April 1860, No. 1,758, and recorded in the Miscellaneous Proceedings of Government, dated 30th April 1860.

Ordered that the above Endorsement be communicated to the Officer in charge of the Audit and Account Departments for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

PUBLIC WORKS DEPARTMENT.

Bill submitted by the Government of Fort Saint George for the sanction of the Government of India with No. 222, dated the 28th January 1860.

Proposition submitted for Approval.				Orders by the Govt. of India.			
Description.	Amount.			Register No., P. W. D.	Amount sanctioned.		
	Rs.	A.	P.		Rs.	A.	P.
Constructing a Lock and Calingulah for completing the Coringa Channel at Kadeyapoo Lunka, in the Godavery Division	13,085	8	4	13	13,085	8	4
Remarks.				Passed. Original Bill and enclosures returned. Forwarded to the Government of Fort Saint George as No. 1,758, dated the 9th April 1860.			

(Signed) R. DEBOURBEL, Bt.-Captain,
Offg. Under Secy. to the Govt. of India.

No. 176. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th April 1862, No. 12,570:—

SIR,

1 Letter from the District Engineer, Bellary, dated 24th February 1862, No. 467.
1 Specification.
1 Estimate.
1 Sketch (Survey).
1 Letter from the Consulting Engineer for Railways, No. 188, dated 11th November 1861, with one copy of correspondence and one sketch.

1. I have the honor to submit a sketch map showing the line, accompanied by an estimate amounting to Rupees 9,350, for constructing a first class District Road *across* the Maduckseerah Táluq in Bellary, from the boundary of the Muddygherry Táluq in Mysore to the boundary of the Paughur Táluq also in Mysore.

2. The road was first proposed by the Chief Engineer in Mysore in a letter to the Consulting Engineer for Railways on the 8th November 1861, wherein he remarked on its importance as a Railway feeder in connection with certain roads existing and proposed in the Mysore country. He observed that there was already a made-road from Muddygherry in Mysore to the Bellary frontier, and that he would undertake the construction of the line, four miles long, from Paughur to the opposite frontier of the Maduckseerah Táluq in Bellary, remarking at the same time that Maduckseerah is a very rich Táluq, abounding in tanks and sugar cultivation, and that Muddygherry is also an important

place. The Consulting Engineer remarked that he had no hesitation in saying that the road would be an important feeder to the Bangalore branch Railway, and the Chief Engineer of the Madras Department having concurred in this view, the estimate now submitted was called for.

3. The proposed road is 9 miles and 365 yards long. The line passes over a very trifling extent of cultivation, but chiefly over waste land well adapted for the formation of a road, the soil being gravelly, and in only one place, and that for a short distance, will there be so steep a slope as 1 in 30. There is considerable bullock traffic at present along a track in the direction of the line. The estimate provides for gravelling six yards in the centre of the road nine inches deep, and includes 15 road drains of varying dimensions from 1 vent of 3 feet square to 5 vents of 4 feet broad and 6 feet high.

4. The road appears a very desirable one, but I imagine that if it is approved of and sanctioned by Government, the question of funds for its execution must lie over until it be seen if the amount required can be made available from the Reserve Fund of next year.

No. 177. ORDER THEREON, 7th May 1862, No. 980.

1. As the proposed 1st Class District Road in the Mudduckseerah Táluq of Bellary to connect portions of the Mysore territory on the north and south, is reported to be important as a feeder to the Bangalore branch of the Madras Railway, the Government sanction the estimate of 9,350 Rupees submitted for its construction ; and will leave the Deputy Chief Engineer to propose hereafter from what funds in the next Budget it can be met.

2. The Mudduckseerah Táluq is said to be a very rich one, abounding in tanks and sugar cultivation, but the proposed line passes over very little cultivation, running chiefly over waste land well adapted for the formation of a road. The estimate provides for a gravelled road of little more than 9 miles, and includes 15 masonry drains of different dimensions.

3. The Government observe that there is already a made-road from Muddygherry in Mysore to the Bellary frontier, and that the Chief Engineer of that State undertakes to open a road in continuation of that for which the present estimate provides as far as Powgad, four miles. Nothing is said about the communication north of Powgad. The Government would wish to know whether any road exists at present in this direction or whether it is proposed to construct one hereafter.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 178. Read the following letter from Captain J. MITCHELL, Officer in charge of the Government Central Museum, to T. PYCROFT, Esq., Chief Secretary to Government, Fort Saint George, dated Madras, 1st May 1862, No. 30 :—

SIR,

1. I have been informed by the Presidency District Engineer that the newly erected cage at the People's Park is ready for the reception of the Tigers now at the Museum, which must be removed to enable him to dismantle the other cage.

2. The portable cage required for their transfer is now occupied by the Cheetahs at the People's Park, and I have communicated with the Honorary Secretary of the Park Committee with a view to their transfer to one of the compartments of the new cage.

3. The doors of the large cage at the Museum, as well as that of the portable cage, open in the ordinary way on hinges, and it is in consequence necessary that both doors be opened before the portable cage can be run up close to the other, to shut off any lateral means of escape. I consider this a source of much possible danger, and my object in addressing you is to obtain the authority of Government for the District Engineer to alter the swinging door of the portable cage to a sliding one that can be both opened and shut while the cages are close together, and that he may also execute any repairs found necessary in this cage to make it safe. The expense cannot be much, and I feel bound to avoid any risk of these dangerous animals escaping in this populous Town, the consequences of which might be a dreadful loss of human life.

4. I have also the honor to request that the work may be considered emergent and executed at once without waiting for the usual estimates.

No. 179. ORDER THEREON, 7th May 1862, No. 981.

Communicated to the Acting Deputy Chief Engineer, Central Circle, who will be good enough to instruct the District Engineer Presidency to carry out the work referred to in the foregoing letter with as little delay as practicable.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Read the following letters :—

No. 180. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 9th April 1862, No. 12,500 :—

SIR,

1 Letter from the Acting District Engineer, North Arcot, No. 1,574, dated 19th March 1862, with Mr. O'Hara's Appeal dated 11th February 1862, and one letter from Mr. O'Hara, No. 946, dated 19th March 1862, and two copies of Extracts from Progress Report marked A and B.
1 Do. from the District Engineer, North Arcot, No. 1,460, dated 27th February 1862.
1 Do. No. 1,254, dated 18th January 1862, with Mr. O'Hara's protest No. 802, dated 13th January 1862.

1. With reference to Order of Government, No. 2,325, 17th December 1861, I have the honor to forward a document from Mr. O'Hara, Deputy Commissary, and 2nd Assistant District Engineer of North Arcot, appealing to the Honorable the Governor in Council to be relieved from the penalty of Rupees 818½ ordered to be recovered from him on account of the expense arising from unauthorized alterations made to the Naikondy bridge in the Salem District.

2. If Mr. O'Hara had confined himself to an appeal to be relieved from the retrenchment on the ground that it was a large sum to pay from a Civil salary of Rupees 200 a month, and that he was seriously inconvenienced by the whole of his Civil salary being retrenched each month, I would have been happy to recommend his application for the favorable consideration of Government on account of his long and good service in the Department; but the reasons which he urges in support of his appeal are refuted by other documents and circumstances.

3. Mr. O'Hara appeals to be exempted from the retrenchment on two grounds, 1st, that the foundations of the Naikondy bridge, as laid out when he was in the Salem District, did not necessarily entail the arch being made wider than was originally planned and intended; and 2ndly, that, even admitting the error of his having allowed the *foundations* of the bridge to be greater than what had been estimated for, ample money remained unexpended when he left the District to complete the bridge.

4. In regard to the first objection raised by him, he argues, that the Extract from the District Engineer's Progress Report which is marked A and attached to his appeal is a correct description of the state of the work when he inspected it and reported on it. It runs thus :—

" The west abutment and 2 piers completed with their skew backs, the west abutment " requires 2 courses of bricks to bring to water level." On receiving his appeal, I pointed out to Mr. O'Hara that without any evidence to the effect, it was very clear that the second mention of the word west in the above remark was a clerical error, but to make the matter clear, I sent him an authenticated copy of the extract from his own Progress Report which the District Engineer of Salem had furnished to this Office when the inquiry was pending regarding the bridge. It is marked B and is attached to his appeal. It runs thus :—

" The west abutment and 2 piers completed with their skew backs. The east abutment " requires 2 courses of bricks to bring to water level."

5. That the latter is the correct reading, there cannot be two opinions. But Mr. O'Hara urges that the word *east* is a clerical error on the part of the District Engineer. It is requisite

that I should notice the discrepancy, but it is not of any real importance as either reading condemns Mr. O'Hara. If the case was as he states, that the west abutment only and 2 piers were completed with their skew backs, he is equally responsible for the increased width of road-way.

6. In his first appeal No. 802 of 13th January 1862, the endeavoured to defend himself by declaring that the original project was for the arches to spring from the river bed, and that an addition to the length of the foundations of the abutments and piers did not involve a greater quantity of arch; also, that the piers were a subsequent addition to the bridge; but I personally pointed out to him in Madras that the original plan had piers three feet high; and that by his own admission the west abutment and 2 piers being completed with their skew backs, it followed as a natural consequence that the arch would be made to correspond to those skew backs; but willing to give him the benefit of any doubt there might possibly be, I have delayed this report a few days in order that I might confer with Captain Gahagan, the District Engineer, who was expected in Madras, and on asking that Officer if there was any thing to show what was the exact state of the Naikondy bridge at the time in question, except Mr. O'Hara's report; Captain Gahagan assured me that he knew from personal inspection that the state of the bridge was exactly as described in document marked B attached to Mr. O'Hara's appeal.

7. As respects Mr. O'Hara's statement that sufficient funds remained to complete the bridge when he left the Salem District, it is only requisite to remark that in the Government order on the subject the excess over the sanctioned estimate is recorded as Rupees 1,566-6-7, and that Mr. O'Hara was not made responsible for the excess in the expenditure on the bridge, but only for that part of it which arose from his "unwarrantable deviation from the plan."

8. It will be observed from the correspondence which accompanies, that I had pointed out to Mr. O'Hara how worthless his objections and arguments were, and that he had adduced nothing which was not before Government when their order was passed, but as he presses for the submission of the papers to Government I beg to forward them.

No. 181. From Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th April 1862, No. 12,569.

SIR,

With reference to my letter, No. 12,500 of the 9th instant, transmitting Mr. H. O'Hara's appeal to the Governor in Council, I have the honor to submit a demi-official communication signed by Captain Gahagan, District Engineer, and Captain Clay, 1st Assistant District Engineer, distinctly showing what was the exact state of the Naikondy bridge at the time Mr. O'Hara left the Salem District, and consequently gave up charge of that work.

1 Demi-official communication signed by Captain Gahagan and Capt. Clay.

From Captain T. E. GAHAGAN, District Engineer of Salem, to Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, dated Salem, 8th April 1862.

MY DEAR CARPENDALE,

1. With reference to our conversation on Saturday last regarding the exact state of the Naikondy bridge at the time of Mr. O'Hara's removal from Salem to North Arcot, I find, on referring to my Inspection Lists for 1859-60, that I inspected the bridge on the following date:—

1859, August 14th, Remark made in Inspection List.—"Naikondy bridge work stopped."

2. The construction of the bridge was stopped by floods in August 1859. Mr. O'Hara quitted the Salem District on the 19th of the following November; and the construction of the bridge was resumed in *February* 1860.

Between August 1859 and February 1860, no work *whatever* was done.

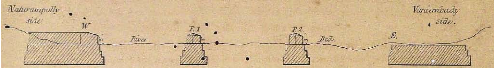
3. Annexed is a sketch to the accuracy of which I can certify *most positively*, of the bridge as it remained from August 1859 until February 1860, and consequently, as it was when Mr. O'Hara quitted the Salem District.

I have made the sketch from my own recollection of the state of the bridge during the period abovementioned.

4. On inspecting the work in August 1859, I remarked to the Overseer in charge (Serjeant Barringer) that it was a great pity that the *east* abutment remained incomplete: his reply was that he had pushed on the work as rapidly as possible, but had been interrupted by freshes.

The cost of the brick executed in Mr. O'Hara's time was Rupees 4-12-0 per cubic yard: the cost of the brickwork executed in Captain Clay's time (by contract) was Rupees 4-8-0.

Sketch showing the state of the Naikondy Bridge between August 1859, and February 1860.



W. West abutment, complete with skew back.

P 1, P 2. Two piers completed, with skew-backs.

E. East abutment; foundation laid to within six inches of the surface of the river bed.

(Signed) T. E. GAHAGAN, Captain,
District Engineer.

(Signed) A. D. CLAY, Captain,
Assistant District Engineer.

No. 182. From Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th April 1862, No. 12,551.

SIR,

1. I have the honor to submit for the information of Government two letters Nos. 1,001 and 1,202 which I received yesterday, under cover of the Acting District Engineer of North Arcot, from Mr. H. O'Hara, Deputy Commissary and 2nd Assistant District Engineer. Two days ago I received a highly improper letter from Mr. O'Hara, which I have given him the opportunity of withdrawing and apologizing for, thinking it might have been written in a moment of excitement, but the present communication appears to have been deliberately and advisedly prepared, and as it moreover contains a most grave charge against Captain Gahagan, District Engineer, Salem, I deem it my duty to lay it before Government without delay.

1 Letter from Mr. O'Hara, No. 1,001, dated 5th April 1862.
1 Do. No. 1,002, dated 5th April 1862.
1 Do. No. 979, dated 1st April 1862.

2. I beg to draw the attention of Government to the very insubordinate style of Mr. O'Hara's letter, whether viewed as that of a Second Assistant District Engineer, or of a Warrant Officer, and to suggest that he shall not be allowed to resign his situation, pending the result of the opportunity which I afforded him of withdrawing a former letter, and pending the investigation of the serious charge which he has brought against Captain Gahagan.

Proceedings of the Madras Government, Public Works Department, 7th *May* 1862.

No. 183. From Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 15th April 1862, No. 12,701 :—

SIR,

1. Referring to my letter, No. 12,551, dated 10th April 1862, in which I mentioned that I had a few days before given Mr. O'Hara, Deputy Commissary and Second Assistant District Engineer in North Arcot, the opportunity of withdrawing and apologizing for what I considered a most improper letter, I have the honor to submit a communication from Mr. O'Hara, which I have just received under cover from the District Engineer North Arcot, and on consideration of which I forbear to lay the letter, which I objected to, before Government.

1 Letter from Mr. O'Hara, No. 1,026, dated 11th April 1862, under cover from the Acting District Engineer, dated 12th April 1862, No. 13.
1 Copy of the Proceedings of the Deputy Chief Engineer, Central Circle, No. 12,447, dated 8th April 1862.

2. Having placed Mr. O'Hara's letter, No. 1,005 of the 5th instant before Government I have not considered it requisite to address any communication to the District Engineer regarding it.

No. 184. ORDER THEREON, 7th May 1862, No. 982.

1. The first two of these papers forward, and relate to, appeals preferred by Mr. O'Hara, at present 2nd Assistant District Engineer of North Arcot, against the decision of Government (Proceedings 17th December 1861, No. 2,335, paragraph 4) holding him accountable for 818½ Rupees, being the extra charge caused by his unwarrantable deviation from the sanctioned plan, whereby the road-way of the Naikondy bridge over the Kullair in the Salem District, was unnecessarily widened. Colonel Carpendale has properly pointed out to Mr. O'Hara that there is nothing new in the arguments adduced by him, to alter the decision of Government in the matter in question, as the facts of the case remain the same.

2. The third paper submits Mr. O'Hara's resignation of his appointment, but referring to the insubordinate manner in which it is tendered, and the grave charges brought by Mr. O'Hara against Captain Gahagan, District Engineer of Salem, Colonel Carpendale recommends that his resignation should not be accepted pending an investigation into these charges. Not only is the whole tone of the letters utterly insubordinate and offensive, but in paragraph 5 of his letter of the 5th instant, No. 1,001, Mr. O'Hara expressly charges Captain Gahagan with compelling an Officer of the Department, in one or more instances, to *falsify* the accounts of the Range, and inferentially with a proneness to assert an untruth if it would suit his purpose. Charges so unbecomingly made by an Officer in a subordinate position against his official superior would be unwarrantable in a Civilian, but when it is considered that Mr. O'Hara is a Warrant Officer bound to speak in respectful terms of his Commissioned superior, his offence is seriously enhanced.

3. Adverting, therefore, to the unbecoming manner in which Mr. O'Hara has submitted his resignation, the Governor in Council declines to accept the same, and directs that he be called upon to state specifically and clearly what the charge is that he brings against Captain Gahagan, and to name the evidence that he wishes to produce in support of his charge. Mr. O'Hara will understand that he is to state the particulars of the alleged falsification of accounts to which he refers.

4. The last paper forwards a letter from Mr. O'Hara withdrawing another improper communication from him, that Colonel Carpendale had given him the opportunity to recall, and which letter consequently that Officer forbears to lay before Government. In this apology it is observed that Mr. O'Hara apparently expresses regret for the tone of his communication of the 5th instant also, but a simple expression of regret for a letter that contains a grave accusation against a superior Officer of the Department cannot atone for the offence, or do away with the subject matter of the accusation itself, which remains the same. In the absence of all

retractation, this accusation must now be inquired into, and it remains to be seen whether Mr. O'Hara will be able to substantiate it, or whether he will have to suffer the consequences of bringing forward a charge of so serious a nature incapable of proof.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 185. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 12th April 1862, No. 12,627 :—

SIR,

1. With reference to paragraph 10 of the Proceedings of Government of the 4th instant, No. 678, I have the honor to refer you to the list of incomplete works which was sanctioned* by Government, from which it will be observed that out of the estimate of Rupees 19,170, for re-building a portion of the Murthyaur under tunnel, &c., and clearing the Ponnairy and other channels connected therewith, Rupees 7,984 had been expended up to 30th April 1861, and the balance, viz., Rupees 11,186, has been allowed from the Reserve Fund of the current official year, so that the sum of Rupees 4,170 applied for in May 1861, is not now required.

* In Proceedings, dated 9th October 1861, No. 1,872.

2. The information called for in paragraph 9 of the above Proceedings will be furnished separately by the Deputy Chief Engineer, Southern Circle.

No. 186. ORDER THEREON, 8th May 1862, No. 983.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 187. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 15th April 1862, No. 266/Kr 114 :—

SIR,

1 Letter from District Engineer Kistna, No. 231, dated 2nd April 1862.
1 Estimate.
3 Plans.

1. I have the honor to submit herewith for the consideration of Government an estimate amounting in the aggregate to Rupees 1,940, for excavating and tunnelling a channel in the Kistna District to carry off the drainage waters from a tract of land of considerable value, yielding a Revenue of Rupees 11,747, for which there is at present no sufficient outlet.

2. The tract in question is situated in the Gudewada Táluq, between the Pullaru and "Ryves' Channel," and the "Boodimair ;" and though the surface water does now find its way, after a fashion, into the Colair Lake and its adjacent swamps, it is chiefly through very tortuous channels, which serve partially as channels of irrigation.

3. The drain which Major Anderson proposes to excavate will be a great improvement ; and I therefore trust Government will be pleased to give the work sanction at an early date, and to suffer the funds for it to be provided out of the amount allotted for "repairs" in the Kistna District for 1862-63.

No. 188. ORDER THEREON, 8th May 1862, No. 984.

The estimate submitted with the above letter is sanctioned. The funds will be provided from the source pointed out by the Acting Deputy Chief Engineer in paragraph 3.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 189. Read the following Proceedings of the Madras Government in the Public Department, dated 2nd May 1862, No. 530 :—

Communicating Despatch from the Home Government sanctioning the proposal for making provision in the Public Works Budget for the necessary outlay on account of the People's Park. } (Vide Public Proceedings, 2nd May 1862, Nos. 3-4.)

No. 190. ORDER THEREON, 8th May 1862, No. 985.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 191. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 23rd April 1862, No. 12,896 :—

From Captain T. E. GAHAGAN, District Engineer of Salem, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Salem, 11th April 1862, No. 271.

SIR,

I have the honor to forward an original letter, No. 139 of the 1st instant, to my address from the Officer in charge of the Oossoor Range, stating that the sanctioned estimate of Rupees 2,000 (Extract Minutes Consultations, No. 2,716 of the 31st July 1861) for re-constructing and enlarging a Gram Godown at the Remount Depôt will probably be exceeded by *Rupees* 200 owing to the old materials in hand turning out to be worth Rupees 150 only, instead of *Rupees* 350 (at which amount they are valued in the sanctioned estimate).

Enclosure 1.

From Captain A. D. CLAY, 1st Assistant District Engineer, Salem, to Captain T. E. GAHAGAN, District Engineer, Salem, dated Kistnagherry, 1st April 1862, No. 139.

SIR,

I have the honor to bring to your notice, that in the sanctioned estimate for the new Gram Godown at the Remount Depôt the old materials are valued at Rupees 350, but on carefully inspecting them since the old building has been pulled down, I find that I cannot use any of the timber, and the outside value of the old material that can be used in the new building is Rupees 150, I think therefore that the sanctioned estimate will be exceeded by the difference of value of old material and of the new which I must get.

1 Original letter with 1 Enclosure, No. 271, dated 11th April 1862.

1. Submitted for the information of Government, with reference to their Proceedings, No. 1,505, dated 8th August 1861.

* Rupees 2,000.

2. Government will observe that the sanctioned estimate* for dismantling, rebuilding and enlarging the Gram Godown at the Remount Depôt near Oossoor is likely to be exceeded by Rupees 200, as the old materials have since been discovered to be worth only Rupees 150, instead of Rupees 350 as originally valued and entered therein.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 192. ORDER THEREON, 8th May 1862, No. 986.

Under the circumstances mentioned in the above Endorsement the Government sanction the additional sum required, viz., Rupees 200, for the completion of the Gram Godown at the Remount Depôt near Oossoor in the Salem District, the estimate for which, Rupees 2,000, was sanctioned in Proceedings of Government, Military Department, No. 2,716, dated 31st July 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 193. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 31st March 1862, No. 7:—

SIR,

1. From the papers which accompanied your letter No. 85, of 31st December last, it appears that the Ponany and Chetwye Canal, although navigable during the rains for boats of two feet draught, becomes impassable during the dry months, in consequence, partly of the withdrawal of water for irrigating the rice fields on its banks, and partly of the bunds which the cultivators throw across it in several places, to prevent the influx of salt water from tidal rivers and lagoons.

2. Thus the Canal answers only very imperfectly the important purpose of connecting the Ponany River with the series of back-waters running southward from Chetwye, and of thereby forming a continuous line of inland navigation from the Madras Railway to the Port of Cochin. The Canal cannot be effectually improved unless the bunds are removed, but this cannot be done without compensating the cultivators of the neighbourhood by buying up their fields at an estimated expense of Rupees 44,220. For the present, therefore, it has been resolved only to sanction an outlay of Rupees 4,600 for the purpose of deepening the bed; though increased depth cannot apparently be of much service so long as the villagers have the power to establish bunds across the channel. You have, I observe, called for a well-considered plan for connecting Cochin with the Railway by means, either of the Canal, or of a good road in a favorable direction. On receipt of this plan, you will be more in a position to judge of the expense of permanently raising the level of water in the Canal. It is evidently of very great importance that some convenient means of communication between the Railway and Cochin should be provided as early as possible, and it may be that the proposed plan of purchasing the lands will be found to be the most effectual mode of attaining this object.

No. 194. ORDER THEREON, 8th May 1862, No. 987.

Communicated to the Deputy Chief Engineer, Southern Circle, who will be good enough to expedite the submission of the project called for in the Orders of Government, No. 2,463, dated 31st December 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 195. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 29th April 1862, No. 13,069:—

SIR,

1. With reference to the Proceedings of Government, No. 2,499, dated 31st December 1861, I have the honor to state that I am of opinion that two years' service in a grade, combined with good conduct, should suffice to render members of the Upper Subordinate establishment eligible to promotion. According to the present rules all Upper Subordinates who have not served in a lower grade, and who joined the Department subsequent to January 1857, must serve

Government Notification dated 2nd March 1862.

from the date of their first appointments as Assistant Overseers the following periods before they can be considered as eligible to promotion on the grounds of seniority and good conduct, viz.:—

		Years.
For promotion to	Overseer	5
Do.	Assistant Supervisor	15
Do.	Supervisor	20
Do.	Sub-Engineer, 3rd Class	25
Do.	do. 2nd do.	30
Do.	do. 1st do.	35

While those persons placed in the Upper Subordinate branch on, or prior to January 1857, are required to serve in each grade the following periods, viz.:—

	Years.
Overseer	10
Assistant Supervisor	3
Supervisor	5
Sub-Engineer, 3rd Class	5
Do. 2nd do.	5

2. These rules, as pointed out in my letter of the 25th October 1861, No. 6,370, have operated most prejudicially to the interests of the Department, by causing discontent among many of its deserving members, who, for want of opportunity, have not distinguished themselves to the extent considered sufficient to warrant their promotion by Government on the grounds of merit. The object of these rules was doubtless to leave room for the advancement to the higher grades of men possessing superior professional abilities, &c., but considering that no industrious and hard working man can be long in the Department without acquiring valuable experience in the performance of his duties, I certainly think that seniority and good conduct, together with zeal in the execution of his duty should be taken into account equally with superior attainments; and entertaining these views in the matter I recommend that the following scale should be adopted in the place of those given above, and laid down in paragraph 26 of the Government Notification, dated 2nd March 1860:—

		Years.	
For promotion to	Overseer	2	from date of first appointment as Assistant Overseer.
Do.	Assistant Supervisor	2	do. Overseer.
Do.	Supervisor	2	do. Assistant Supervisor.
Do.	Sub-Engineer, 3rd Class	2	do. Supervisor.
Do.	do. 2nd do.	2	do. Sub-Engineer, 3rd Class.
Do.	do. 1st do.	2	do. do. 2nd do.

3. By this arrangement a varied practical training would be ensured and a well-conducted man may expect to rise to the higher grades of the Department within a reasonable time from the date of his first appointment.

4. Apart from regular promotions in accordance with the above scale the Government should continue, as at present, to promote for special reasons, as remarked in their Proceedings of the 31st December 1861, under acknowledgment.

No. 196. ORDER THEREON, 8th May 1862, No. 988.

1. In supersession of the periods of service required by the Notification of 2nd March 1860, to render members of the Upper Subordinate establishment of the Public Works Department eligible to promotion in the ordinary course to the grades next above their own, the Government sanction the scale proposed in paragraph 2 of the foregoing letter. It will of course be understood that promotions are to be made only on the occurrence of vacancies.

2. The Government will still reserve to themselves the right of promoting men out of the usual course on the ground of distinguished merit.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 197. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Government Superintendent and Controller Madras Pier Works, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 20th March 1862:—

SIR,

1 Enclosure. I have the honor to forward for the information of Government a copy of a Certificate for the last section of the Madras Pier, which I have this day given to the Contractor's Agent.

Certificate of the 5th and last (200 feet) Section of the Madras Pier.

1. I hereby certify that with the exceptions to be hereafter noted, the 5th and last section of 200 feet in length (including the T head) of the Pier has been completed to my satisfaction, the work of the same having been executed in a substantial, sound, and workman-like manner.

2. From measurements frequently made while this section was in progress, the Piles, in all the parallel rows advancing sea-ward, *i. e.*, from the 81st to the 101st (the last inclusive) were found to be embedded in the ground depths, varying from 12' 7" to 15' 6" and averaging in this portion about 14' 0".

3. The *present depth* to which the same Piles are embedded varies from 9' 6," to 12' 1," the average being 10' 6," while the Piles in the T head, north and south of the abovementioned, vary from about 15' 0" to 12' 7" in the ground, the average not exceeding 14' 0" instead of 15' 0," but they are passed under the authority of Government conveyed in their Order No. 1,021, dated 31st May 1861.

4. Owing to some of the braces of T iron having been carried on, by mistake to Calcutta, in the S. S. Ship "Jason," which also brought them from England, and others of them now undergoing slight alterations in their lengths, the structure cannot be regarded as quite complete in these details.

5. A different arrangement from that proposed to be followed by the Contractor having been fixed upon for the fender piles at each corner of the Pier Head, the necessary caps and fastenings for the same are not, as yet, provided. The walings which surround the Pier Head are not quite completed, and several fender piles remain to be driven at this part.

6. The "necessary turn tables" are none of them in position, neither are the rails, points, and switches, permanently laid down. The fixed cranes, besides not being, as yet, erected, are not in all respects complete, as some alterations require to be made in them before they can be of any use for the purposes of the Pier.

7. The covering over with planking, spaces, which are necessarily left open for the present and other minor details remain to be attended to.

8. The "clips and bands" and the "diagonal stiffening pieces" mentioned in Lieutenant Colonel Boileau's last Certificate are not now required, being dispensed with under Order of Government No. 365, dated 6th March 1862.

(Signed) J. CARPENDALE, Lieut.-Colonel,
Govt. Supt. and Controller, Pier Works.

Govt. Supt.'s Pier Office,
Chepauk,
20th March 1862.

(True Copy.)
(Signed) J. CARPENDALE, Lieut.-Colonel,
Govt. Supt. and Controller, Pier Works.

No. 198. MEMORANDUM.

1. The Government Superintendent and Controller of the Madras Pier has the honor to inform the Secretary to Government, Department Public Works, with reference to his Memorandum No. 53, dated 12th instant, that the Piles in the 5th and last section of 200 feet of the Pier, are very nearly the lengths entered in the 4th column of Colonel Boileau's revised Memorandum, submitted to Government on the 5th June 1861, which superseded that, sent with his letter of 10th May previous, and they are for the most part longer rather than shorter than the lengths measured from the Drawing.

2. The enclosed statement of the lengths, ascertained by actual measurement of the outer or 8 inch Piles in the 4th and 5th Sections of the Pier, shows how closely the figures agree with the lengths as taken off the Contract Drawing, and specified in the 4th column of the Memorandum above referred to. It is as well to observe that as one Pile only in each row appears in the Contract Drawing (it being an elevation) the measurements reported by Lieutenant-Colonel Boileau as taken from that Drawing were for an 8 inch Pile in each row only.

Govt. Supt.'s Pier Office,
Chepauk,
16th April 1862.

(Signed) J. CARPENDALE, Lieut.-Colonel,
Govt. Supt. and Controller, Pier Works.

No. 199. ORDER THEREON, 8th May 1862, No. 989.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 200. Read the following Proceedings of the Madras Government in the Military Department, dated 1st May 1862, No. 1,583 :—

Communicating letter from the Quarter Master General of the Army, stating that new Cells are not required at Poonamallee for the present, and requesting that instructions may be issued countermanding all new works for the Depôt at Arcot. } (Vide Military Proceedings, 1st May 1862, Nos. 4 @ 6.)

No. 201. ORDER THEREON, 8th May 1862, No. 990.

1. Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

2. The orders in the Military Department relative to the countermanding of all new works at Arcot should be promptly attended to.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 202. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 25th April 1862, No. 12,949 :—

SIR,

In continuation of my letter No. 12,701, of the 15th instant, I have the honor to forward the accompanying letter received from the Acting District Engineer, North Arcot, on the subject of Mr. O'Hara's application for the withdrawal of his resignation of his appointment in the Department Public Works.

1 Letter from the Acting District Engineer North Arcot, No. 1,803, dated 24th April 1862.

No. 203. ORDER THEREON, 8th May 1862, No. 991.

The Acting Deputy Chief Engineer, Central Circle, is referred to the Proceedings of Government No. 982, dated 7th May 1862. Until the information therein called for is before Government, no further orders will be issued in this case.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 204. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Government Superintendent and Controller Madras Pier Works, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 15th April 1862 :—

SIR,

1 Letter from the Superintendent of Marine, No. 1,114, dated 5th April 1862, with one sketch.
1 Copy of letter to the Superintendent of Marine from this Office, dated 26th March 1862.
1 Letter from the Agent to the Pier Contractor, dated 11th April 1862.

2 Original letters, to be returned.

1. Referring to Order of Government, No. 366 of 6th March 1862, which directs that the Pier Contractor shall be required to furnish the thirteen screw moorings which he had covenanted to provide, as though they may not all be required at the Pier, they may be found useful elsewhere; I have the honor to report for the information of Government that as the order still left it an open question whether the screw moorings should be put down in the Madras Roads, or not, I addressed the Superintendent of Marine on the subject again, as it appears to me very important for the reasons, I have therein given, that this point should be settled with the least practicable delay. I now beg to submit Mr. Franklin's reply which is accompanied by a sketch showing the positions the whole thirteen moorings should occupy, provided they are furnished of the requisite sizes.

2. The mention made in the Contract of the screw moorings is very vague, and no drawing of either of them, or of the position they should occupy, has ever come into my possession. I addressed the Contractor's Agent here on the subject, and his reply, which is to the effect that the Contractor will doubtless send out drawings showing the positions the moorings are to occupy, accompanies. I am not at all disposed to think from the view which Mr. Wells has in many instances taken of his employer's responsibility under the contract, that he, who is still managing the business for Mr. Johnston, will either send out the style of moorings which the Superintendent of Marine evidently intends; or that he will, unless it can be enforced under the Contract, put those moorings down at such a distance from the Pier as is shown in Mr. Franklin's sketch; and I would suggest, if the Government determine on putting down all, or any of the moorings in the Madras Roads, that Mr. Franklin's letter and sketch should be communicated to the Home Government by the earliest Mail, with a request that the matter of the dimensions and the position of the moorings shall be settled with the Contractor Mr. Johnston, and that a copy of the drawing of 1856, which shows the position of the moorings as referred to in the printed Contract, may be transmitted as early as possible.

3. Mr. Wells has taken it on himself, as Mr. Johnston's representative, to alter the size of the *turn tables*, to change the fender piles at the corners as arranged in 1856 from three to one, or as arranged in 1858 from two to one; he disowned his liability to put up certain waling pieces that were distinctly provided; and as this Government at one time did not consider the moorings to be requisite, I am apprehensive that the Contractor may now furnish screw moorings, but of such a size as to be unsuitable for large ships. All that is said in the specifications attached to the Contract is :—

"Thirteen screw moorings, with the necessary chains and buoys are to be placed round the "Pier head and for a distance on each side of the main Pier, in the positions shown upon the "Drawings."

No. 205. ORDER THEREON, 8th May 1862, No. 992.

Ordered that the foregoing letter and its enclosures be forwarded by the earliest opportunity to the Home Government, in view to the dimensions and positions of the screw moorings to be laid down near and around the Madras Pier, being settled between the Right Honorable the Secretary of State and the Contractor in England, and to a copy of the drawing of 1856 showing the position of the moorings being sent out as speedily as possible.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Read the following papers:—

No. 206. Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 19th March 1862, No. 11,652.

From Captain E. A. FOORD, District Engineer of South Arcot, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Cuddalore, 6th March 1862, No. 181 :—

SIR,

1. With reference to your Endorsement No. 10,931, on the Order of Government of the 19th February, No. 262, I have the honor to inform you that the condition of the road from Mercanum to Tindevanum is described in the Statements which accompanied my letters of the 14th March 1859, No. 227, 9th December 1859, No. 189, and 14th June 1860, No. 40.

2. This is however not the only incomplete road in this District on which 5,000 Rupees could be laid out to great advantage. In my letter of the 17th October 1860, No. 126, I recommended the completion of certain bridges and gravelling on the roads from Cuddalore to Virdachellem, Chittambaram and Kalikurchi at a total cost of Rupees 14,200 which was the amount I supposed would be available for new works during 1861-62. These works are now being carried out. I have recommended that the above three works should be completed during next official year and the gravelling of the Mercanum road should be commenced.

Letter No. 128, 4th November 1861.

3. The estimate for the Mercanum road made in 1857, provides for 1,760 cubic yards of gravel for each mile, that is for a breadth of 6 yards and a thickness of 6 inches. The estimate shows the distance of the quarry from each mile and the rates for digging, carting and spreading. The chief item of expense in work of this kind is carting. The rate allowed in the estimate is 3 Annas per cubic yard per mile. Carting is now often done at 2½ Annas per mile if the quarry roads are good, otherwise a somewhat higher rate has to be paid ; I therefore consider the rate in the above estimate proper. The rates for digging and spreading are the same as those now prevailing. I have however sent a copy of the estimate to Captain Paxton and requested him to correct it if necessary ; as since 1857, it is possible that some new gravel, quarries may have been found. Should however the sum of Rupees 5,000 be sanctioned from the above estimate, I purpose recommending that the amount be laid out in making an entirely new road for about four miles in preference to laying the gravel in the present track. A statement has been prepared showing the work to be done in each of the four miles of the new road.

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1 Original letter No. 181, dated 6th March 1862.
1 List, 1-2,989-1860.

1. Submitted for the orders of Government, with reference to their Proceedings, No. 262, dated 19th February 1862.

Nos. 227, 189 and 40, dated 14th March and 9th December 1859, and 14th June 1860.

2. In the letters marginally noted, the District Engineer brought to notice, among other works, the bad state of the Salt road between Mercanum and Tindevanum, and recommended (vide accompanying list) that Rupees 5,000 might be laid out in putting some of the worst portions in good order. But as these reports were called for by this Office, in connection with Proceedings of Government, No. 950, dated 7th May 1860, this particular road was not taken into consideration, as under the limitation of expenditure proposed for 1860-61 and 1861-62,* funds could only be provided for the few works entered in the current year's Budget. In the Budget for the ensuing year, a sum of Rupees 5,000 is entered but marked A. As this amount, therefore, will not be available for expenditure in that year, the Deputy Chief Engineer, Southern Circle, has the honor to recommend that the sum of Rupees 9,000 applied for, for repairing the branch roads, and the worst parts of the road between Mercanum and Tindevanum, may be sanctioned from the Reserve Fund of 1862-63.

* Vide Endorsement, No. 10,811, dated 21st February 1862.

3. Government will observe that in the event of Rupees 5,000 being sanctioned for the Mercanum road, the District Engineer proposes to recommend that the amount may be laid out in making an entirely new road, for about 4 miles in preference to laying the gravel on the present track.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 207. Endorsement of the Deputy Chief Engineer, Southern Circle, to Lieut.-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 29th March 1862, No. 12,138.

Read the following letter from Captain E. A. FOORD, District Engineer, South Arcot, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Cuddalore, 22nd March 1862, No. 194 :—

SIR,

One Proceedings of the Board of Revenue, No. 6,435.

1. With reference to your Proceedings No. 10,700 of the 19th February, I have the honor to state that I reported on the roads leading to the Salt Pans in my letters of the 27th January 1862, No. 164, and 15th February No. 173. Since the letters were written, I have inspected the roads leading to the Goondalum, Koodicaud and Teagavelly Pans; and am of opinion that their state had nothing to do with the falling off in the sale of Salt in November. The roads are very short, one of them is bridged and gravelled, and the others passing over sandy soil for the most part could not have been in as bad a state as the unmetalled miles of some of the principal roads.

2. The Mercanum road, as I have before stated, requires to be gravelled, and will always be in bad order in the monsoon until it is gravelled.

3. A new road is now being made (from the Local Fund) to connect the Teagavelly Pans with the Chellumbrum road, and also with the Salem road, and I have ordered estimates to be made for improving the roads to the other Pans, and for bridging the backwaters that have to be crossed in getting to the Koodicaud and Teagavelly Salt Pans. These backwaters are however only impassable for a few days in the monsoon, when many rivers and nullahs on the high roads are also impassable.

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1 Original letter, No. 194, dated 22nd March 1862.

1. Submitted for the information of Government, with reference to their Proceedings, No. 215, dated 14th February 1862.

2. Government will observe that the District Engineer reports that the roads leading to the Goondalum, Koodicaud and Teagavelly Pans, are very short, one bridged and gravelled, and the other passing on sandy soil, and that they had nothing to do with the falling off in the sale of Salt in November 1860.

3. The letters referred to by the District Engineer were submitted to Government with Endorsements, Nos. 10,386, and 10,811, dated 8th and 21st February 1862, respectively.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 208. ORDER THEREON, 8th May 1862, No. 993.

1. From the first paper, the Government learn with reference to paragraph 1 of their Proceedings of the 19th February 1862, No. 262, that the District Engineer of South Arcot did in 1858 and 1860, bring to notice the bad condition of the Salt road leading from Tindevanum to Mercanum, and that the worst portions of it could be put in order for 5,000 Rupees. The pro-

posal to expend 9,000 Rupees from the Reserve Fund of 1862-63 in effecting this object and repairing the branch roads, which was submitted for sanction in the Deputy Chief Engineer's Endorsement of the 21st February 1862, No. 10,811, is repeated in his present Endorsement. In their Proceedings of the 31st March 1862, No. 627, the Government expressed their willingness to consider the expediency of making such a grant after the commencement of the official year, on due cause being shown for the course proposed; but they must remark that had the Deputy Chief Engineer, Southern Circle, brought the subject prominently to notice at an earlier date, it is probable that means would have been forthcoming from the Reserve Fund of the past year for this work, instead of it having had to wait until the opening of the present year. As it is very important that the Salt roads should be put in good order, the Government are willing to assign the money now applied for, and they accordingly sanction the grant of Rupees 9,000 from the Reserve Fund of the current year for putting in order the road from Tindevanum to Mercanum and repairing the branch lines.

2. The second paper and its enclosure will be communicated to the Revenue Department, with reference to paragraph 3 of Proceedings in that Department, dated 11th February 1862, No. 262, and in continuation of the Order in the Public Works Department, dated 31st March 1862, No. 627.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 209. Read the following Telegram from Colonel STRACHEY, Calcutta, to Secretary to Government, Madras, dated 26th April 1862:—

"26th April.—The Imperial assignment for Public Works for one thousand eight hundred and sixty-two and sixty-three, will remain sixty-eight lacs, but in addition to this the full allotment of the one per cent. of the Income Tax will be granted as last year. In consequence of this, works set down in the Budget to be executed from the Income Tax Fund, amounting to two lacs and nine thousand, will be struck out of the Imperial Budget. A deduction of forty-one thousand Rupees will also be made from the sum set down for repairs, and the aggregate of these amounts, two and a half lacs, will cover the charges for Stores set down in excess of the Budget allotment. The original Madras assignment was made before the transfer of Canara to Bombay, and the Madras Budget has therefore been relieved to the extent of about two and three-quarter lacs."

No. 210. ORDER THEREON, 8th May 1862, No. 994.

Communicated to the Chief Engineer, Deputy Chief Engineers, Northern, Southern, and Central Circles, and to the Officer in charge of the Audit and Account Departments of the Central Office for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 211. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 6th May 1862, No. 293 M/42 :—

SIR,

1. With reference to Order of Government, No. 470, 18th March 1862, I have the honor to submit herewith a Map and Statement of roads existing within the limits of the Northern Circle.

1 Statement.
1 Map.

2. The map also exhibits the roads of the Central Circle, the tabular list of which will be furnished, as soon as completed, by the Officer in charge of that Office.

No. 212. ORDER THEREON, 8th May 1862, No. 995.

The Statement and Map received with this letter will be forwarded to the Chief Engineer, to whom also the statements due from the Southern and Central Circles should be made over by the respective Deputy Chief Engineers with a view to the compilation of one General Return for the entire Presidency.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 213. Read the following Proceedings of the Madras Government in the Public Department, dated 2nd May 1862, No. 533 :—

Requesting to ascertain what has been done in pursuance of the Orders of Government herein referred to sanctioning the construction at Calicut of a Small-pox and Leper Hospital and the cause of the delay in the erection of the same. } (Vide Public Proceedings, 2nd May 1862, Nos. 9-10.)

No. 214. ORDER THEREON, 9th May 1862, No. 996.

Communicated to the Deputy Chief Engineer, Southern Circle, for early report.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 215. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 15th April 1862, No. 12,697 :—

SIR,

With reference to the Proceedings of Government, No. 328, dated 28th February 1862, authorizing the expenditure of Rupees 50 for the experiment in regard to prickly pear at

Palaveram, I have the honor to request that the sanction of Government may be given to the transfer of the sanction to Arcot; as the Officer who suggested it, Mr. Dopping, is gone to that District from Madras.

No. 216. ORDER THEREON, 9th May 1862, No. 997.

1. Sanctioned accordingly. The work will be executed from the General Funds at the disposal of the District Engineer, North Arcot.

2. Lieutenant-Colonel Carpendale will be requested to report what is to be done with a view to the eradication of the prickly pear at Palaveram.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 217. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 21st March 1862, No. 222 Gm 12:—

SIR,

1 Letter from District Engineer, Ganjam, No. 263, dated 17th November 1861.
1 Do. to Do. No. 9,730, dated 23rd January 1862.
1 Do. from do. No. 391, dated 6th March 1862.
1 Do. from Collector, No. 32, dated 10th March 1862.
1 Abstract estimate, Rupees 12,000.
3 Surveys.
1 Plan.

1. Herewith I have the honor to submit for the consideration of Government a project brought forward by the District Engineer for improving the Port of Ganjam, at an estimated cost of Rupees 12,000.

2. A good deal of correspondence on the project has taken place between the District authorities and myself, and it is enclosed for reference in judging of the merits of Captain Philipps' scheme, the main features of which I proceed to recapitulate.

3. The embouchure or estuary of the Ganjam river has long exhibited a tendency, in common with other rivers in this coast, to trend northwards under the influence of the powerful littoral current, which sets from the south during a great portion of the year; and which, uncheked by the feeble efforts of a stream for many months without flood, deposits a bar of sand across its mouth, forcing its communication with the sea higher and higher, and so contracting it, that at last but a bare and scant passage for cargo boats is left.

4. To obviate this evil Captain Philipps, supported by the opinion of the Collector Mr. Forbes,* proposes to construct a groyne, or training wall, in the position marked in the Plan, rectifying the channel of the river, and cutting it off from the bend or elbow by which it at present sweeps to the northward. Selecting a favorable opportunity where the river is getting in fresh, the bar is to be partially opened, and the power of the stream is relied upon to affect the rest.

* Vide Mr. Forbes' letter to Government, Department Public Works, No. 273, 5th October 1861, in Government Proceedings No. 1,921, dated 18th October 1861.

5. This is the outline of the scheme. I must confess I look upon it as one of an unquestionably experimental character; but at the same time as one which gives better promise of success than any other which could be devised. Doubt of course there must be as to the results; and it seems to rest upon the probability that when all scouring action has ceased in the river through the diminution of its volume, the tidal scour will be found insufficient to keep a fair way open, at the new, or restored mouth; and that the enduring action of the southerly current, aided by the ceaseless beat of the surf, will result, as heretofore, in restoring the bar and in practically closing the river's embouchure.

6. At the same time it is to be considered that a more favorable issue is clearly possible; and it will therefore be for Government to decide whether it is justifiable to expend the sum of Rupees 12,000 in carrying out the experiment. My own opinion is that the expenditure *is* justifiable, and even advisable. There has been considerable agitation on the part of the Mercantile community upon the question of improving the Port of Ganjam, and the essay will demonstrate the earnest desire of Government to adopt any course towards this end, the expediency of which has been clearly established; while at the same time its results, whether in success or in failure, will furnish data more or less valuable to guide us in forming a judgment upon future propositions of a similar character.

7. The works recommended are not, it will be observed, costly, as great economy can be practised in constructing the river groyne by using the masonry of the old Fort, the demolition of which has been sanctioned by Government; bringing the blocks to the site of the groyne by a light tram-way.

No. 2,445, 31st December 1861.

8. The opening proposed to be left in the groyne, which is otherwise objectionable, cannot, it will be seen by the correspondence, be dispensed with, both on account of the passage required for boats bringing produce from the Chilka Lake, and to ensure a proper supply of brine by the Karee Gedda to the Government Salt Pans; a measure of paramount importance.

9. The Estimate now submitted (and which I considered it necessary somewhat to increase to cover the cost of a plain pile driver and contingencies) is not provided for in the Budget of 1862-63. If sanctioned therefore, the amount must be allotted out of the General Reserve Fund.

No. 218. ORDER THEREON, 9th May 1862, No. 998.

After due consideration of the measures proposed in the above letter, His Excellency the Governor in Council is opinion that their success is more than doubtful, from the fact of there being an insufficiency of tidal scour available. The attempt to compel the river to cut a new channel for itself will ultimately prove abortive, as in the course of a few years this will turn to the north as the other has done. Hence the project is altogether of too experimental a character to warrant any expenditure thereon.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 219. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 24th March 1862, No. 5:—

SIR,

1. The report for 1860-61 of operations in the Public Works Department, transmitted with your letter No. 83, of 24th December 1861, has been laid before me in Council.

2. There are a few passages in the report which appear to call for special remark. It is much to be regretted that, while so many works of importance remain in abeyance for want of funds, no less than 12 per cent. of the amount sanctioned for the expenditure of the year under review should have remained unemployed, owing chiefly to the want of proper arrangements for its expenditure. Again, I cannot but remark the very large proportion (36 per cent.) which the item for establishments and contingencies bears to the whole amount expended. The reason assigned for this is the decrease in the expenditure during the year, but the very fact of the establishment being on a scale suited to more extensive operations makes it the more to be regretted that operations were not carried on to the extent which the pecuniary means available would permit. I observe that upon irrigation works a sum of about four lacs has been expended, and although this is in excess of last year's expenditure by one lac, yet, considering how much remains to be done in the Deltas of the Godavery, and especially the Kistna, I fully participate in your feeling of dissatisfaction that three lacs at the disposal of the Department were suffered to lie idle, instead of being laid out upon works from which an increase of revenue may be most readily obtained.

3. You have very properly called the attention of the Chief Engineer to the imperfect state of the roads in Cuddapah and Madura, and to the complaints made by Captain Ryves of the Departmental Establishment in the latter District.

4. In the Godavery District, it is gratifying to observe that the land revenue has so greatly improved, and that the traffic on the Canals has so largely increased. Of the Kistna division, the report in respect of augmented cultivation is not favourable, owing to the still incomplete state of the main irrigation channels. No satisfactory reason, however, is assigned for the falling off of traffic on the Bezwarah and Seetanagarum Canals.

5. In Salem and Coimbatore some progress has been made during the year towards providing feeders to the Railway, an object to which I attach great importance.

6. With regard to the roads leading to the Cotton Districts of the Southern Mahratta country from the port of Sedasheghur, you anticipated that one line at least would be sufficiently advanced by the end of 1861 to permit of cotton being brought down from the interior to the north bank of the Kalee Nuddee or Sedasheghur river. I shall be glad to hear that your anticipations in this respect were realized, previous to the transfer of the Department to Bombay.

7. I have to express my satisfaction that, as far as you have been able to judge, the amalgamation of the offices of Garrison Engineer and Civil Architect at the Presidency has been attended with success.

8. The substitution of a duplicate Annual Progress Report for the Report now under review, as suggested by the Chief Engineer, is approved.

No. 220. ORDER THEREON, 9th May 1862, No. 999.

1. Paragraphs 1, 2, 7 and 8 of this Despatch will be communicated to the Chief Engineer for information.

2. The attention of the Acting Deputy Chief Engineer, Central Circle, is particularly called to the remark in paragraph 3 regarding the Cuddapah roads, and he is requested to report with reference to paragraph 6, how far the anticipations therein referred to regarding the Cotton roads in North Canara have been realized.

3. Paragraph 4 will be communicated to the Deputy Chief Engineer, Northern Circle, for information, and paragraphs 3 and 5 to the Deputy Chief Engineer, Southern Circle. Colonel Birdwood's attention is called to the remark of the Secretary of State on the subject of providing feeders to the Railway.

4. The Government observe that the establishment of the Madura District has been placed* on a different footing since the date of their orders marginally† noted.

* Proceedings, No. 1,926, dated 10th October 1861.

† Do. No. 2,394, dated 24th December 1861.

5. The Government have in their Proceedings No. 566, dated 25th March 1862, approved of all improvements to Salt Platforms in Madura being executed by the Salt Department.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 221. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 27th March 1862, No. 11,984:—

SIR,

1. I have the honor to request that you will be good enough to bring under the consideration of Government the destitute condition of one Thimmen, a Picottah man at the Seven Wells, and who having become incapacitated for work through serious injuries consequent on falls incurred in the discharge of his duty, has been dismissed from employment, for his service only extending to 15 years he is not entitled to a Pension. The District Engineer does not consider that the man ought to get any gratuity, as he is of opinion that he is fit for employment in various ways as a cooly. On the other hand the First Assistant District Engineer, whom I addressed on the subject of giving the man employment, considers him quite unfit for employment of any kind, and gives him a very high character for his whole period of 15 years' service.

1 Letter from District Engineer, Presidency, No. 2,430, 22nd February 1862, with one enclosure.
1 Do. No. 2,355, dated 13th February 1862.
1 Do. No. 1,552, dated 18th November 1861.
1 Do. from the 1st Asst. District Engineer, Presidency, No. 1,781 25th February 1862, with one enclosure.
1 Petition from Thimmen, dated 4th November 1861.
1 Letter from the District Engineer, Presidency, No. 2,677, dated 20th March 1862.

District Engineer's letter, No. 1,552, 18th November 1861.
Do. do. No. 2,355.
Do. do. No. 2,430.
12th February and 22nd February 1862.

1st Assistant District Engineer's letter, No. 1,781, 25th February 1862.

2. It is difficult to reconcile such conflicting opinions, but I find by the report of the Surgeon of the 1st District "that the man has lost the sight of his left eye entirely, and of his "right eye partially; that his gait is unsteady; and that he is in a very nervous condition, the result "of serious injuries received in his head, &c., on duty," and it appears to me that, that being his condition, after 15 years of exemplary service as a Picottah man, he is highly deserving of the charity of Government, even more so than his family would be if he had been killed in the discharge of his duty, in which case the claim would be at once admitted; and I now beg strongly to recommend that a gratuity of six months' pay or Rupees 57, may be awarded to discharged Picottah man Thimmen.

3. I have not thought it necessary to submit a statement or descriptive roll as the form laid down in Grant's Circular Order Book, page 333, is only intended for the families of the deceased workmen, and not for cases like that now submitted.

No. 222. ORDER THEREON, 9th May 1862, No. 1,000.

The case of Thimmen, late a Picottah man at the Seven Wells, Madras, here submitted for consideration, is one in which the bounty of Government would be well applied. He is represented to have served 15 years with an exemplary character; and he is now incapacitated for work of any kind, in consequence of several falls sustained in the execution of his duty.

The Acting Surgeon of the District has certified that the man has lost the use of his left eye completely, and that of the right eye partially; that his gait is unsteady; and that he appears to be in a very nervous condition, doubtless the result of serious injuries received in his head, &c., on duty. Lieutenant Tulloch, the Officer under whom he immediately served stated that his general emaciated appearance speaks at once for the great shock his system has received. Under these circumstances, His Excellency the Governor in Council authorizes the grant to the abovementioned Thimmen of a gratuity of 57 Rupees, being equal to six months wages at 9½ Rupees a month. The money will be paid by the District Engineer out of the General Funds at his disposal.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 223. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th April 1862, No. 262 G. 95, :—

SIR,

1 letter from the District Engineer Godavery, No. 1,501, dated 31st March 1862, with one enclosure.
1 Estimate.
1 Specification.
1 Plan.

1. In pursuance of the instructions conveyed in Extract from Proceedings of Government, under date the 21st March 1862, No. 518, I have the honor to submit herewith a plan for an iron lattice girder bridge of 50 feet span, together with an estimate of the probable cost of its construction amounting to Rupees 4,600.

2. If bridges upon this principle are substituted at Ellore and Gigulapa in the Godavery District for masonary arches, the saving to Government will consequently be as follows :—

* G. O. 407, 12th March 1862.

		RS.
Amount sanctioned* for two brick bridges less item for one centring...............	...	13,600
Estimated cost of two iron lattice bridges...		9,200
difference.........		4,400

3. The original plan for a lattice bridge, submitted by the District Engineer, which is otherwise very creditable, required revision, as it was calculated to bear only a weight† very much under the practical load which it will have to sustain, independent of the superstructure. A revised plan has therefore been prepared in which dimensions are assigned to the component parts of the girders admitting of the safety of the bridge under a load of 120 lbs. per square foot, including asphalte and gravel composition for the road-way. Two feet have also been added to the width between rails, and iron ballasters have been substituted for teakwood under the latter head.

† 5 tons, or 22 lbs. per superficial foot, for a road-way 50′ × 10′.

4. The various strains upon the girders have been carefully calculated and provided against; and I think it both just to an able junior Officer of the Department, and at the same time useful to Government, to mention that in these investigations I have received very valuable assistance from Lieutenant H. W. Wood, who has made the subject of iron bridges his particular study.

5. In framing the estimate I have accepted Major Stoddard's Dowlaishwaram datum of Rupees 250 per ton for iron wrought and fitted, but not put up; though I confess I think the charge is high. Iron of every description is just now, I am informed, unusually cheap in Madras,

large stocks being on hand and no demand existing or arising. Except the ⅝ and ½ T iron required for upper and lower flanges and for diagonals, I have no doubt, therefore, that all the metal required for these structures might be provided considerably under estimate cost, without trenching upon the working stock at Dowlaishwaram. Before however any steps are taken with this view it will be necessary to ascertain the description and quantity of the iron stated to have been purchased by Lieutenant-Colonel Randall in Calcutta for the Kistna and Godavery Workshops, and of which no particulars are in my possession.

6. In connection with this subject I may mention that Major Stoddard has submitted a rather considerable Indent by Mr. Moncrieff the Superintendent of the last named establishment, which Government will perhaps be so good as to take into consideration while the subject of the proposed iron lattice bridges is before them. If this supply is ordered from England, by which no doubt the best material would be secured, I would beg leave to suggest that a request be made to the Home Office to let the iron be selected by the Consulting Engineer to the India Council, G. P. White, Esq., C. E., for the special uses of bridge and boat forging; as I am aware that this will ensure both economy and efficiency.

2 Enclosures.

No. 224. ORDER THEREON, 9th May 1862, No. 1,001.

1. With the above letter the Deputy Chief Engineer furnishes the information called for in Proceedings of Government of the 21st March 1862, No. 518. From the plans and estimates now forwarded Government learn that the cost of the iron bridges for a span of 50 feet are only Rupees 9,200, being Rupees 4,400 less than the amount sanctioned for two masonry bridges of 60 feet span.

2. On the assurance of the Deputy Chief Engineer that the design and calculation have been carefully investigated, the Government sanction the substitution of these bridges in lieu of those authorized in Proceedings of 12th March 1862, No. 407, and direct that application be made early in 1862-63 for a grant from the Reserve Fund of that year for their execution.

3. The subject alluded to in the last paragraph of the Deputy Chief Engineer's letter should be treated of in a separate communication. Application has been made to the Government of India for a copy of the list of iron furnished at Colonel Rundall's request to the Godavery and Kistna Districts.

Dated 28th March 1862, No. 593 A.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 225. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 19th April 1862, No. 12,816.

From Captain J. BEAN, District Engineer, Malabar, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Calicut, 8th April 1862, No. 369 :—

SIR,

1. I have the honor to enclose copies of a letter* from the Resident of Travancore and Cochin together with its accompaniment,† as per margin, requesting that the navigation may be kept open in the Editirooty Channel until the 1st May next.

* No. 503, dated 4th April 1862.
† No. 191, dated 3rd April 1862.

2. I have directed Mr. Brosnahan, the 2nd Assistant District Engineer, to provide for the passage of boats during the excavations in the bed, but to stop the work until the close of the official year in the event of his not being able to do so. I have also informed him this day that I have reported on the matter to you for approval or otherwise.

3. The deepening of the Channel is included in the estimate of Rupees 4,600 sanctioned‡ for outlay in the current official year, and the proposed work amounts to Rupees 300.

‡ Order of Government No. 2,463, dated 31st December 1861.

From F. N. MALTBY, Esq., Resident of Travancore and Cochin, to Captain J. BEAN, District Engineer, Malabar, dated Cochin, 4th April 1862, No. 503.

SIR,

I have the honor to transmit herewith copy of a letter from the Dewan of Cochin, No. 191, dated the 3rd instant, on the subject of the deepening of the Editirooty Channel, and shall be obliged if you will inform me, whether the work can be postponed, or so carried on as not to interrupt the navigation.

From T. SHUNGOONY MENON, Dewan, to F. N. MALTBY, Esq., British Resident of Travancore and Cochin, dated Cochin, 3rd April 1862, No. 191.

SIR,

1. The Tahsildár of the Trichoor District has reported to me that under the instructions of Captain Bean, District Engineer of Malabar, the Sub-Overseer stationed at Yennamakul, has commenced deepening that part of the Editirooty Canal which lies between Moonayom and Patany Cadavoo.

2. I am very unwilling to throw any obstacles in the way of this very useful work, but as it will, at present, effect materially the free passage of the numerous boats laden with provisions &c., required for the approaching Teeroonasom or anniversary of the death of Her Highness the late Amah Rajah of Cochin, I am constrained to do so, and beg therefore that you will be so good as to take such steps as you may deem necessary for the postponement of the work in question till the 20th Madom (1st May 1861.)

(True Copies.)

(Signed) J. BEAN, Captain,
District Engineer, Malabar.

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1. Submitted for the information of Government, with reference to their Proceedings, No. 2,463, dated 31st December 1861.

! Original letter with 1 enclosure.

2. Government will observe that the District Engineer has directed Mr. Brosnahan, to provide for the passage of boats during the time that excavations are being made in the river bed, but to stop work until the close of the current official year, in the event of this being impracticable.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 226. ORDER THEREON, 9th May 1862, No. 1,002.

The proceedings of the District Engineer, Malabar, as reported in the foregoing Endorsement of the Deputy Chief Engineer, Southern Circle, are approved.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 227. Read the following Proceedings of the Madras Government in the Revenue Department, dated 5th May 1862, No. 975 :—

Communicating with certain instructions to the Collector of Godavery District, letter from District Engineer Upper Godavery, stating that the Salt shed at Kunta is no longer required for Government purposes, and that it may be offered to Messrs. Roghé & Co. at a price of one hundred Rupees. (Vide Revenue Proceedings, 5th May 1862, Nos. 89-90.)

No. 228. ORDER THEREON, 10th May 1862, No. 1,003.

Communicated to the Acting Deputy Chief Engineer, Northern Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 229. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 25th April 1862, No. 282/N.45 :—

SIR,

1 Letter from the District Engineer Nellore, No. 786, dated 21st April 1862.
1 Estimate.

1. I have the honor to submit herewith an estimate amounting to Rupees 130, for re-constructing a portion of the arch of the Kavivedú bridge on Trunk Road No. 6, in the Nellore District which was, it is presumed, damaged by lightning during October last; and regarding which Government passed Orders calling for the enclosed estimate, in Proceedings No. 633, under date 31st March 1862.

2. The restoration of the bridge has been proceeded with in the interim, and the amount expended will be charged in the general Bill on the original estimate for the work.

No. 230. ORDER THEREON, 10th May 1862, No. 1,004.

The Government sanction the estimate, amounting to Rupees 130, submitted with the foregoing letter for re-constructing a portion of the arch of the Kavivedú bridge on Trunk Road No. 6, in the Nellore District.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 231. Read the following letter from Lieutenant-Colonel R. STRACHEY, Secretary to the Government of India, Public Works Department, to the Resident at Hyderabad, dated Fort William, 12th April 1862, No. 1,397 :—

SIR,

From Hyderabad, dated 18th February.
To do. do. 6th March, No. 56.

With reference to your letter No. 23 of 28th February last, and to the Telegram marginally noted, I am directed to inform you that no steps need be taken, until further orders, for the construction of temporary Barracks at Jaulnah, as it has been decided that a European Regiment is not to occupy that Station.

No. 1,398.

Copy forwarded to the Government of Madras for information.

(Signed) R. STRACHEY, Lieut.-Colonel,
Secretary to the Government of India.

No. 232. ORDER THEREON, 10th May 1862, No. 1,005.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 233. Read the following letter from Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Department Public Works, dated Chepauk, 29th April 1862, No. 13,042:—

SIR,

I have the honor to submit, for the information of Government, the accompanying most satisfactory report received from the District Engineer of Trichinopoly of the progress made in the construction of the Codumurty and Iyar Bridges in that District.

1 Original letter No. 2,145, dated 14th April 1862.

No. 234. ORDER THEREON, 10th May 1862, No. 1,006.

The Government are pleased to hear of the satisfactory progress made in the construction of the Codumurty and Iyar Bridges in the Trichinopoly District, and they notice with pleasure the exertions of Assistant Supervisor Bateman and Overseer Cahill.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 235. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 12th April 1862, No. 12,613.

Read the following letter from Captain J. BEAN, District Engineer of Malabar, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Calicut, 7th March 1862, No. 331:—

SIR,

1. I have the honor to request that you will give me permission to build the Alatoor Munsif's Court, which is one of the buildings for erection in this official year in Malabar, of bricks in place of laterite stone, as the latter material is not found near the proposed site, and will cost much, if brought from a distance.

2. Bricks are a better material for building the Court with, and can be used without our having to increase the present rate of the estimate.

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1. Submitted for the information of Government with reference to their Proceedings No. 1,143, dated 21st June 1861.

1 Original letter, No. 331, dated 7th March 1862.

2. The Temulpuram Court House will be built at Alatoor, the Cusbah station—hence it is designated the Alatoor Munsif's Court House.

3. Under the authority granted in paragraph 8, Section II, Chapter IV, of the New Code, and as it will not increase the amount* of the sanctioned estimate, the Deputy Chief Engineer, Southern Circle, has authorized the District Engineer to use bricks in lieu of laterite stone in the construction of this building; which he trusts will meet with the approval of Government.

* Rupees 1,440.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 236. ORDER THEREON, 10th May 1862, No. 1,007.

The proceedings of the Deputy Chief Engineer, Southern Circle, as reported in the foregoing letter, are approved.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 237. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 25th April 1862, No. 12,969 :—

SIR,

1 Letter dated 25th March 1862, No. 11,912, with 1 enclosure.
1 Do. dated 14th February 1862, No. 1,719.

1. With reference to the accompanying letter from the Deputy Chief Engineer, Southern Circle, forwarding with his support an application from the Acting District Engineer of Trichinopoly, for the promotion of Mr. Bateman to the rank of Supervisor, *vice* Dick deceased, I have the honor to state, for the information of Government, that after giving the subject my best consideration I am of opinion that the Assistant Supervisors most deserving of advancement to the next grade on the ground of merit are Ramanjooloo Pillai, Serjeant D. Campbell and Acting Conductor W. Bateman.

	Date of first appointment.	Date of present appointment.
Serjeant D. Campbell,	26th August 1853.	5th November 1858.
Acting Conductor Bateman,	14th February 1853.	23rd November 1858.

2. The former Subordinate has served the longest period in the Department, and is senior to the other two men in the grade of Assistant Supervisor. On the other hand he has not so many marks in the Confidential Reports. In this respect Mr. Bateman stands first (the maximum in his case being 500 and the number gained by him 485, as compared with 700 maximum and 630 and 555 respectively in the cases of Serjeant Campbell and Ramanjoolco Pillai, and moreover his date of first appointment is about 6 months prior to that of Serjeant Campbell, although the latter is a few days his senior in the grade of Assistant Supervisor.

3. On the whole, therefore, I think that as the vacancy has occurred in the Trichinopoly District, Southern Circle, and as Mr. Bateman has so good a claim, he should be promoted as an exceptional case to the rank of Supervisor, *vice* Dick deceased, agreeably to the District Engineer's recommendation, and I accordingly request that the Government will be pleased under paragraph 26 of the Notification* dated 2nd March 1860, to sanction the same from the 6th February 1862, the date following that of Mr. Dick's death.

* Page 509 of the Fort Saint George Gazette.

4. It will be seen by the above marginal statement that Mr. Bateman has served 3 years and 5 months in his present grade, the prescribed period under ordinary circumstances being 5 years.

No. 238. ORDER THEREON, 10th May 1862, No. 1,008.

Agreeably to the recommendation of the Chief Engineer, the Government authorize the promotion of Assistant Supervisor Bateman to the rank of Supervisor, *vice* Dick deceased, to have effect from the 6th February last.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 239. Read the following letter from Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, to Lieutenant Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 3rd May 1862, No. 122:—

SIR,

3 Original letters from the District Engineer, Malabar, Nos. 251, 312 and 352, dated 18th December 1861, 15th February and 19th March 1862.
1 Plan, 1-4,630, 1862.
1 Abstract estimate, Rupees 670.

1. With reference to the Proceedings of Government, No. 1,335, dated 19th July 1861, I have the honor to forward, for submission to Government, the accompanying estimate amounting to Rupees 670, for adapting the Military buildings at Manantoddy to the Survey and Settlement Offices, in the District of Malabar.

* No. 251, dated 18th December 1861.
† 1861-62.

2. From the letter* herewith forwarded it will be observed that the greater part of the work has been completed; but as the Budget† allotment for current repairs could not bear the charge, the District Engineer stopped further progress, and applied for permission to take the amount from the allotment for new works; but as the rates originally given in the estimate for the items marginally indicated did not correspond with the data of the District, the estimate could not be submitted for the sanction of Government until the question was satisfactorily settled. I regret, however, that in the discussion about the rates, the District Engineer's request for funds was accidentally overlooked.

Brick in mud.
Do. in chunam.
Plastering with do.
Jungle wood.

3. The present estimate has been examined and corrected in this Office, and the rates given in it are those prevailing in the Wainád Range of the Malabar District. I therefore request that you will be good enough to obtain the sanction of Government thereto, the amount, viz., Rupees 670, to be defrayed from the Reserve Fund for 1862-63.

4. I beg to add that in anticipation of the sanction of Government, the District Engineer has been directed to proceed with the work to completion, advancing the necessary money from the General Funds at his disposal for 1862-63, to be repaid from the Reserve Fund when sanctioned by Government, which I trust will meet with approval.

5. The plan received with the Proceedings of Government quoted above, is herein enclosed.

No. 240. ORDER THEREON, 19th May 1862, No. 1,009.

1. In paragraph 2 of the foregoing letter the Deputy Chief Engineer, Southern Circle, reports that the work connected with the conversion of the Infantry Place of Arms at Manantoddy into Offices for the Revenue Survey and Settlement Departments was for the most part completed during 1861-62, but notwithstanding this circumstance he applies for the full amount of the estimate, viz., Rupees 670, from the Reserve Fund of the current year.

2. Before acceding to the Deputy Chief Engineer's request the Government would wish distinctly to be informed whether the work executed during 1861-62, was paid from the funds allotted to the Malabar District for that year, as if so it will be necessary to sanction the balance only from the Reserve Fund of the current year.

3. The exact amount of work executed and that paid for by the District Engineer in 1861-62 should be reported for the information of Government.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 241. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 12th April 1862, No. 265,G/98 :—

SIR,

1 Letter from District Engineer, Godavery, No. 1,453, dated 25th March 1862.
2 Estimates.
2 Reports.
2 Plans.
1 Sketch.

1. I have the honor to submit estimates amounting in the aggregate to Rupees 17,850 for constructing four Calingulahs or "Escapes" for surplus water in the Godavery portion of the southern embankment of the Ellore High Level Canal, and I beg leave strongly to recommend them for sanction by Government, as it seems clear that the construction of the works named is essential to the safety and preservation of the Canal.

2. I am only surprized that their necessity was not foreseen when that work was originally planned, and that their cost was not included in the General Estimate laid before Government.

3. The District Engineer has already collected materials for them, and he expresses an earnest desire to be permitted to commence and push them on at once, while the water is kept out of the Canal; executing them simultaneously with the tunnels as far as the balance* of the estimate for those works entered in the Budget of 1861-62 will admit, and defraying the remainder of their cost out of the General Funds placed at his disposal for 1862-63.

* Rupees 11,504.

No. 242. ORDER THEREON, 10th May 1862, No. 1,010.

1. With the above letter the Deputy Chief Engineer submits estimates amounting to Rupees 17,850 for the construction of four escapes in the portion of the Ellore High Level Canal between Dowlaishwaram and Ellore. The District Engineer represents that the necessity for these works was proved by the experience of the unusually heavy floods of last year in order to prevent the Canal banks on such occurrences from being breached, and the navigation which is of great importance being consequently suspended.

2. The works being undoubtedly necessary are accordingly sanctioned, and their cost will be provided for out of the General Funds at the District Engineer's disposal in 1862-63. The proposals to finish the works while the Canal is closed are also approved.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 243. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 5th May 1862, No. 133 :—

SIR,

1. I have the honor to report, with reference to Government Orders Nos. 746 of the 12th and 886 of 30th ultimo, that I have directed Mr. Roberts, 2nd Assistant District Engineer, to commence forthwith on the surveys and estimates connected with the Red Hill Tank water supply project, and, in anticipation of the sanction of Government, I have authorized him to entertain a small establishment equivalent to that of a 2nd Assistant District Engineer, but somewhat differing on account of the special nature of the employment.

Establishment of a 2nd Assistant District Engineer.

	RS.
1 Estimate maker and Writer...........	30
1 Gumáshta................................	14
1 Lascar..................................	7
3 Do.	18
	69

Establishment for Mr. Roberts.

1 Draftsman and Estimator.................	22
1 Native Surveyor.........................	22
1 Lascar..................................	7
3 Do.	18
	69

2. Mr. Roberts should be assisted in the investigation of the project by an Upper Subordinate, who has good experience in surveying and levelling. Such a person is not available from the regular establishment of the Department, and I accordingly request the sanction of Government to my entertaining for the work Mr. W. Stephenson, who has considerable experience in surveying and levelling, chiefly on the southern line of Railway.

3. Although under Mr. Roberts' orders, he will be usually employed in independent surveying at one place while Mr. Roberts is engaged at another, and I propose that his salary be that of an Assistant Supervisor, Rupees 150 a month with travelling allowance, 2 Rupees a day, all to be paid from the allowance in the estimates for the water supply under the head of Superintendence. The Assistant Supervisor's establishment will be—

1 Lascar...	7
3 Do.	18
	25

No. 244. ORDER THEREON, 10th May 1862, No. 1,011.

1. The Government sanction the entertainment of the undermentioned temporary establishment with a view to the immediate commencement of the surveys and estimates connected with the Red Hill Tank water supply project :—

1 Surveyor 150 Rupees per mensem with travelling allowance at 2 Rupees per day.

Establishment for ditto.

1 Lascar 7 Rupees per mensem.
3 Do. @ 6 Rs. 18 ,, do.

Establishment for Mr. Roberts, 2nd Assistant District Engineer.

1 Draftsman and Estimate maker 22 Rupees per mensem.
1 Native Surveyor.................. 22 ,, do.
1 Lascar.................................. 7 ,, do.
3 Do. @ 6 Rupees... .... 18 ,, do.

2. The cost of the establishment will be defrayed from the sum of Rupees 20,000 provided for the work above mentioned from the 4 lacs allotted to this Presidency in 1861-62 from proceeds of the 1 per cent. Income Tax, and which the Accountant General will be good enough to place at the disposal of the District Engineer Presidency, who will disburse the salaries of the above establishments under orders from the Deputy Chief Engineer, Central Circle.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 245. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 3rd May 1862, No. 106:—

SIR,

1. In reply to your Memorandum No. 65 of 30th ultimo, I am sorry I am not able to report satisfactory progress in the preparation of the surveys and estimates for the Pombel tank project.

2. When it was commenced upon, the survey was being made for a partial restoration of the tank, viz., to contain a depth of, I think, twelve feet of water after two or three months, Government desired that it should be for a full restoration, to contain twenty feet. This involved a contour line of over forty miles in length, and the work was entrusted to Mr. Ratigan, 2nd Assistant District Engineer, the only aid at his disposal being a Sub-Overseer and an Apprentice. The progress was somewhat retarded by Mr. Ratigan meeting with an accident, and it was slow from the difficulty he experienced in finding bench marks of former surveys and boundaries. He had made considerable progress in the contour line when the late Acting District Engineer, Mr. Kennedy, withdrew him as he informed me, on verbal instructions from the Civil Engineer that the project was abandoned and Mr. Ratigan's attention to be given to the investigation of

another project for storing water in the Adayár at the Marmalong bridge. Having confirmed my impression that this proceeding was erroneous, by a personal reference to you, I desired that Mr. Ratigan might return to the Pombel tank project. I will now refer to the District Engineer for precise information of the progress made.

3. I am afraid it will take a very long time to complete the surveys and estimates unless two additional good Surveyors are made available for the work, as there will be much to be done in minor detailed surveys of the property inside the contour-line of the water spread, and other matters.

No. 246. ORDER THEREON, 10th May 1862, No. 1,012.

1. The Governor in Council regrets to observe the slow progress made in the preparation of the surveys and estimates for the Pombel tank project.

2. The Government are of opinion that there is no necessity for the "two additional good Surveyors" recommended by the Acting Deputy Chief Engineer, Central Circle, to be entertained in addition to Mr. Ratigan, 2nd Assistant District Engineer, and the establishment consisting of a Sub-Overseer and an Apprentice which has been allowed to him to carry out the work. They will not, however, object to sanction the entertainment of one temporary Surveyor on Rupees 150 per mensem, exclusive of travelling allowance of Rupees 2 per day as has already* been authorized in the case of the Red Hill tank project, together with the establishment marginally noted, and they trust that with this additional aid, no time will be lost in completing the surveys and estimates called for in Proceedings No. 2,328, dated 18th December 1861. The Chief Engineer will be good enough to arrange for the entertainment of the establishment now sanctioned, the cost of which will be met from the sum of Rupees 20,000 provided for the Pombel tank project out of the 4 lacs allotted to this Presidency in 1860-61 from the proceeds of the one per cent. Income Tax.

* No. 1,011, dated 10th May 1862.

	RS.
1 Lascar............	7
3 Lascars at 6 Rupees each....	18
Total.....	25

3. The Accountant General is requested to place the above mentioned sum of Rupees 20,000 at the disposal of the District Engineer Presidency, who will disburse the salaries of the establishment sanctioned in these Proceedings under orders from the Deputy Chief Engineer, Central Circle.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 247. Read the following letter from Colonel-Commadant H. B. TURNER, Acting Secretary to the Government of Bombay, Public Works Department, to the Secretary to the Government of Madras, dated Bombay Castle, 22nd April 1862, No. 2,265:—

SIR,

In transmitting to you the accompanying copy of a letter from the Acting Superintending Engineer, Southern Circle, No. 709, dated 9th April 1862, I am directed by the Honorable the Governor in Council to request that the Government of Madras will be good enough to arrange for the return of Private Murray to the Madras Presidency, and that you will inform me to what station he should be directed to proceed.

From Lieutenant-Colonel M. K. KENNEDY, Acting Superintending Engineer, Southern Circle, to the Acting Chief Engineer and Secretary to Government, Public Works Department, Bombay, dated Camp Birchee, 9th April 1862, No. 709.

SIR,

1. Referring to the list of articles of machinery held in deposit for the Madras Government by the Executive Engineer North Canara, forwarded with this Office No. 690, of the 5th instant; but more particularly to the Brick-making machine, I have the honor to bring to your notice, that this machine was sent from Madras in charge of Private I. Murray of the Madras unattached list, whose original Corps is, I believe, H. M.'s 102nd Fusiliers.

2. Private Murray arrived at the Birchee Nulla, for which work the machine was required, in September last, but was unable to make use of the machine on account of defects in the pug mill, which, owing to a wrong construction of its blades, would not deliver properly; he was consequently compelled to discontinue its use, and to make a few bricks that have been prepared at the Birchee Nullah, by hand.

3. The sole object therefore of sending the machine was defeated, this object being to supply the want of labor by machinery in a locality whose unhealthiness rendered it very difficult to procure work people, and to retain them when procured.

4. The Tile-making machine mentioned in the list is also here, but never appears to have been set in action.

5. My main object in now writing is to bring to your notice that the services of Private Murray (who is on the temporary establishment of this District, and whose pay, 30 Rupees per mensem, is charged to work) are no longer required, and to beg that he may be recalled to his own Presidency with the least delay possible. Were he an ordinary member of the temporary establishment, arrangements could be made for at once striking him off; but as it is, his position in reference to the Madras Government renders it necessary that they should be consulted in regard to his relief.

6. Perhaps he could return, as he came in charge of the machinery, if it is considered worth while to go to the expense of conveying the latter to Madras or elsewhere.

7. Private Murray is now lying ill in Hullial; and definite instructions regarding his disposal are solicited in time to act on them before the close of the season, for he cannot be employed advantageously any where else in this District, or on any other duty.

No. 248. ORDER THEREON, 12th May 1862, No. 1,013.

G. O. 1,839, dated 5th October 1861.

Communicated to the Acting Deputy Chief Engineer, Central Circle, who will arrange for Private Murray rejoining his Corps as he does not belong to the permanent Establishment of the Public Works Department.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 249. Read the following letter from Major General the Honorable A. A. SPENCER, C. B., Commanding Mysore Division, to Lieutenant-Colonel F. H. SCOTT, Quarter Master General of the Army, dated Camp Mercara, 6th April 1862, No. 60:—

SIR,

No. 465 of 3rd April 1862.

1. I have the honor to forward for submission to His Excellency the Commander-in-Chief the letter as per margin from the Executive Engineer at this station, reporting on the progress of the new Dragoon Barracks.

2. I would earnestly suggest that His Excellency be pleased to move Government to sanction the further sum of 50,000 for the current year, as proposed in paragraph 3 of Captain Mayne's letter.

From Captain J. O. MAYNE, Executive Engineer, Bangalore; to Captain G. DE LA POER BERESFORD, Deputy Assistant Quarter Master General, Mysore Division, dated Bangalore, 3rd April 1862, No. 465.

SIR,

1. With reference to a report asked for by General Spencer regarding the possibility of putting the Dragoon Regiment in the new Barracks during the autumn of the present year 1862, I have the honor to report for his information that when I expressed an opinion that it could be

done with the aid of some temporary buildings, I hoped a sum of at least Rupees one and half lacs would have been sanctioned for expenditure during the next official year, but only Rupees 70,000 has been sanctioned, and I find after well considering the subject and consulting with Lieutenant-Colonel Sayer, Commanding the Regiment, as to the least amount of accommodation the Regiment would require that it is not feasible.

2. For instance the total amount that will be spent up to the end of the current official year (viz., 30th April 1862), will be Rupees 2,35,000, and to finish the buildings now in hand will require a further sum of at least Rupees 80,000. The whole of which must be completed, and many others besides, before the Regiment could possibly be quartered in them.

3. A further sum of at least Rupees 50,000 would be required, and perhaps on a representation to this effect to Government from the General, the necessary funds might be sanctioned.

No. 2,888.

MEMORANDUM.

For the Secretary to Government, Military Department.

Forwarded to Government for consideration and orders. To be returned.

By Order,

(Signed) F. H. SCOTT, Lieut.-Colonel,
Quarter Master General of the Army.

Quarter Master Genl.'s Office,
Fort Saint George,
12th April 1862.

Transferred for disposal in the Department of Public Works.

(Signed) R. HAMILTON, Lieut.-Colonel,
Deputy Secretary to Government.

Fort Saint George,
14th April 1862.

No. 250. ORDER THEREON, 12th May 1862, No. 1,014.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for report, with reference to the last paragraph of the letter from the Executive Engineer Bangalore, No. 465, dated 3rd April 1862. The Government observe that a sum of Rupees 75,000 is provided in the Budget of 1862-63 for the Dragoon Barracks at Bangalore.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 251. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 24th April 1862, No. 12,904 :—

SIR,

1 Letter from the District Engineer, Bellary, No 484, dated 3rd March 1862.
1 Plan.
1 Estimate, Rupees 960.
1 Report.
1 Copies of letters from the Collector of Bellary, with Revenue Statement.

1. I have the honor to submit a plan, with an estimate amounting to Rupees 960, and accompanied by the prescribed report, for raising the bund, constructing a Calingulah, and making certain repairs to the main supply Channel of the Yerramunchee tank in the Pengondah Táluq of the Bellary District.

2. The total amount of the estimate is Rupees 960. The expected increase of Revenue is Rupees 1,230 inclusive of 338 Fasil jásti from an additional 210 acres of irrigated cultivation, and for which a written agreement has been taken from the Ryots, being a return of 128 *per cent.* on the expenditure.

3. The rates in the estimate are considered liberal, and all that is requisite is provided. I recommend that the expenditure may be sanctioned, and the amount provided from the Reserve Fund of 1862-63.

No. 252. ORDER THEREON, 12th May 1862, No. 1,015.

Before sanctioning the estimate submitted with the above letter the Government would wish the Deputy Chief Engineer, Central Circle, to re-consider its provisions for earth and stone work. Judging by the sections of the bund given on the survey plan it would seem that the front slope is less than 1 to 1, and the rear slope rather less than 1½ to 1, whereas the former should be at least 2 to 1 and the latter 1½ to 1; and the rough stone revetment should be at least a yard above the proposed highest water level to protect the bund from the action of waves.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 253. Read the following Proceedings of the Madras Government in the Marine Department, dated 3rd May 1862, No. 120:—

Sanctioning an estimate for erecting a look-out place on the roof of the Custom House in connection with the present Signal house, Madras. } (Vide Marine Proceedings, 3rd May 1862, Nos. 3-4.)

No. 254. ORDER THEREON, 12th May 1862, No. 1,016.

1. Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

2. The work will be proceeded with from the General Fund of the Presidency District for the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 255. Read the following:—

No. 12,715.

Return of Bills passed in the Central Office for cleaning and setting up Machinery during the quarter ending 31st March 1862, submitted to Government with reference to Orders, dated 8th June 1859, No. 1,393, and 8th November 1860, No. 2,309.

District.	Description of works.	Amount. RS.	A.	P.	When passed.	Remarks.
North Arcot.	"Contingent charges of Machinery"—Cleaning and repairing Machinery, &c. Cleaning certain Machines in the District Engineer's Store yard during the month of November 1861.	7	4	0	18th February 1862.	

Central Office of Public Works,
Chepauk, 15th April 1862.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In charge of the Audit and Account Departments.

No. 256. ORDER THEREON, 12th May 1862, No. 1,017.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 257. Read the following letter from P. GRANT, Esq., Collector of Malabar, to J. D. SIM, Esq., Secretary to Government, Fort Saint George, dated Calicut, 1st April 1862, No. 29 :—

SIR,

1. With reference to Proceedings of Government, Public Department, and their Order thereon, dated 19th July 1861, No. 1,337, I beg to forward a sketch exhibiting the land required to be taken up for the new road running from the head of the Tambracherry Pass to Manantoddy.

2. The road, as stated before, will run through a Mr. Jones' land, a portion of which is under Coffee. Its construction will destroy about 108 Coffee bushes.

3. The new line for which land will require to be taken up under the provisions of Act VI of 1857, lies between the points A and B on the sketch, and is indicated by a dotted line, 653 yards in length. Starting from the stream at the point A, 320 yards in length by 6 in breadth, total 1,920 square yards are required, they consist of waste land; the remaining distance to B, 333 yards in length by 5 in width, total 1,665 square yards, is Coffee land. These two sections, forming an aggregate of 3,585 square yards, are all that are required. The extent is considerably less than that given in my letter dated 21st June 1861, but this arises from the fact that the District Engineer has had the line altered in some parts, and has besides taken up as much land only as is actually necessary for the road-way.

No. 258. ORDER THEREON, 12th May 1862, No. 1,018.

1. Under the provision of Sections 2 and 33 of Act VI of 1857, the Governor in Council resolves that the following declaration be made and recorded :—

" Whereas certain land indicated in the accompanying sketch map, consisting of two " sections measuring respectively 320 yards by 6 in breadth, and 333 yards in length by 5 in " breadth, total 3,585 square yards of waste and Coffee land forming portion of a Mr. Jones' pro- " perty, is required for the purpose of forming a road from the Tambracherry Pass to Manantoddy, " the Governor in Council in exercise of the authority vested in him by the provisions of Act VI " of 1857, does hereby declare the said land to be land required for a public purpose."

2. The Governor in Council also resolves, under Section 3 of the above Act, to direct Mr. P. Grant, Collector of Malabar, to take the necessary measures for the acquisition of the above land, and to adjust the claims to compensation advanced on account of it in the manner provided by the Act.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 259. Read the following Proceedings of the Madras Government in the Revenue Department, dated 28th April 1862, No. 904 :—

Requesting that orders may be issued as to the source from which five thousand Rupees can be repaid to the Zamindár of Jeypore, who had contributed the above sum for the formation of the road to Jeypore viâ Galikondah. } (Vide Revenue Proceedings, 28th April 1862, Nos. 367-368.)

No. 260. ORDER THEREON, 12th May 1862, No. 1,019.

The Government authorize the sum of Rupees 5,000, referred to in the last paragraph of the Orders of Government in the Revenue Department, being met from the Reserve Fund of 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No 261. Read the following letter from W. J. RAYNOR, Esq., Officiating Civil Paymaster, to Lieut.-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Fort Saint George, 25th April 1862, No. 166 :—

SIR,

With reference to the Order of Government No. 294, dated 24th February last, re-instating Captain Payne in the position which he held in the Public Works Department at the period of his departure from India on sick leave in June 1860, I have the honor to enquire whether it is the intention of Government that such re-instatement should carry with it the higher rate of salary as 1st Assistant District Engineer, which he drew prior to leaving India, under the 2nd paragraph of Government Order No. 2,263 B, dated 20th September 1859 ; or whether the rank of 1st Assistant District Engineer with the reduced salary under Government Order 2nd September 1859, No. 2,106, is the limit of the exception made in his case, as by remaining absent beyond 15 months he forfeited altogether his appointment in the Department of Public Works. Captain Payne claims the higher rate of Rupees 400.

No. 262. ORDER THEREON, 12th May 1862, No. 1,020.

The Government having in their Proceedings No. 294, 24th February 1862, re-instated Captain Payne in the position which he held in the Department Public Works at the period of his departure from India on Sick Certificate in June 1860, they consider that he is entitled to the higher rate of salary which he formerly drew under paragraph 2 of the Proceedings marginally noted,* and they authorize the Civil Paymaster to pass that Officer's bills in accordance with those orders.

* 2,263 B, dated 20th September 1859.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 263. Read the following letter from Captain W. A. BAKER, Executive Engineer, North Canara, to the Chief Engineer and Secretary to Government, Madras, dated Camp Beitkál, 26th April 1862, No. 416 :—

SIR,

I have the honor to inform you that Lieutenant A. T. Fraser, Assistant Engineer Sedasheghur Range, has this day been relieved of his duties in North Canara and has been directed to proceed to Nellore and report himself to the District Engineer.

No. 264. ORDER THEREON, 12th May 1862, No. 1,021.

Communicated to the Chief Engineer and to the Acting Deputy Chief Engineers, Northern and Central Circles, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 265. Read the following Proceedings of the Madras Government in the Revenue Department, dated 9th May 1862, No. 1,026:—

Requesting to ascertain when the Custom House sanctioned for erection at Beypoor is likely to be completed. } (Vide Revenue Proceedings, 9th May 1862, Nos. 194-195.)

No. 266. ORDER THEREON, 12th May 1862, No. 1,022.

Referred to the Deputy Chief Engineer, Southern Circle, for early report.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 267. Read the following Endorsement of the Officer in charge of the Audit and Account Departments, dated Chepauk, 12th April 1862, No. 12,628.

Read the following letter from Captain R. F. OAKES, District Engineer, Tanjore, to the Deputy Chief Engineer, Southern Circle, dated Tanjore, 25th March 1862, No. 337:—

No. 4,162 of 1858-59 and No. 3,968 of 1859-60.
No. 4,163 of ,, ,, No. 3,969 of ,,
No. 4,164 of ,,
No. 4,165 of ,, ,, No. 3,970 of ,,
No. 1,156 of 1860-61.

SIR,

1. I have the honor to forward the Bills noted in the margin for sanction. No Estimates were passed for these works for the following reasons:—

* Bill Rupees 416-2-5 of which Rupees 250 appertain to 1858-59, and Rupees 166-2-5 to 1859-60.

2. An Estimate* of Rupees 1,987 was forwarded for sanction in March or April 1859, for clearing the Ananda Káveri, which had become very much silted up owing to the destruction of its banks by the breaches which occurred in 1858. The Estimate contained a large item for removing gravel; as this was manifestly an improvement, and there was ample occupation for the Department in restoring the works which had been injured by the floods, I returned the Estimate and requested that a revised Estimate providing only for the emergent work required might be submitted. The work being regarded as an emergent one was commenced in anticipation of sanction, and before the revised Estimate could be prepared all that was urgently required had been done, and no second Estimate was therefore submitted.

Bill Rupees 130.	RS.
1858-59	30
1859-60	80
1860-61	20
	130

3. An Estimate of Rupees 143 was submitted for sanction in May 1859, for repairing the Head Sluice of Kasavaramothatotam in the Vadavar; from the Estimate, however, it was apparent that the re-construction and not the repair of a Sluice was contemplated, and as the season was far advanced, I deemed it too late to carry out the work during the season, and suggested that a Pot Sluice should be substituted in its stead until the next working season. The bank in which the Sluice was situated was a very high one, and the Assistant Overseer in preparing the Estimate had arranged for its execution, and the work was actually commenced on the 10th April 1859.

4. The Sluice is situated close to a surplus Calingulah, and had it not been restored, the safety of the neighbouring Calingulah might have been endangered; the restoration of the Sluice was therefore a very necessary measure, and I trust that under the explanation afforded the Bill may be passed. Owing to the absence of the Contractor, the final payment for the work was not made till June 1860, though the work was completed in July 1859.

No. 4,163 of 1858-59.
No. 3,969 of 1859-60.

5. The work for which Bill No. 4,164, is submitted, was the protection of the north bank of Vettar in the Mailā-Nagore limits in October and November 1858. This bank constantly requires protection during the monsoon, and the work appears to have been undertaken on emergency, and probably was one of real emergency. No proper vouchers accompanied this Bill, the only voucher consisted of an abstract of the station book, upon which Mr. Lawford made the following remark: "Aroomoogam Pillai having died suddenly, it was found that he had not kept up a proper "station book; this is, therefore, submitted as the only obtainable voucher."

Rupees 196-7-2, 1858-59.

6. Bill No. 4,165, of 1858-59, and 3,970 of 1859-60, is in adjustment of a sum of Rupees 117-6-6,† expended in re-constructing an under-tunnel for the benefit of the Oynikatlei lands in the limits of Nagakudi in the Nanillam Tāluq. This work was carried out by Mr. Minchall, under a general order from Mr. Lawford, to prepare and submit Estimates for all works injured by the floods of 1858, and to commence them in anticipation of sanction. By an oversight the Estimate appears never to have been forwarded to the District Office for sanction. The Revenue derived from the Channel was Rupees 69-1-9.

	RS.	A.	P.
† 1858-59	25	0	0
1859-60	92	6	6
	117	6	6

7. I would beg to remind you that all these works were carried out at a time when the energies of the Department were overtaxed in restoring the works destroyed by the floods of 1858, and when delay in the execution of works till Estimates were sanctioned would have rendered it impossible to restore the works sufficiently to secure the cultivation during the season of 1859-60.

Submitted to Government with the recommendation that, under the explanation afforded by the District Engineer, Tanjore, and especially for the reasons mentioned in paragraph 7 of his letter, the Bills* received with the foregoing letter may be sanctioned.

1 Letter and 5 Bills.
* Rupees 860-0-1.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In charge of the Audit and Account Departments.

No. 268. ORDER THEREON, 13th May 1862, No. 1,023.

1. Under the explanation afforded by the District Engineer and on the recommendation of the Officer in charge of the Audit and Account Departments of the Central Office, the Government sanction the Bills submitted with the foregoing letter.

2. The Government cannot understand why these Bills were not sent in sooner. The District Engineer ought to be made aware that he is not to undertake work without authority, and that his business is to send in the Bills as soon as the work is completed, whether there is an Estimate or not. The Chief Engineer will give orders accordingly, and warn Officers in charge of Districts that any similar instances of neglect or delay will be visited severely upon the District Engineer.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 269. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Government Superintendent and Controller Madras Pier Works, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 29th April 1862:—

SIR,

1. The Chief Engineer of the Madras Railway addressed me some time ago, requesting to be informed if there would be any objection to his obtaining from Government two of the movable Cranes now on the Pier and at what cost.

10th March.

2. I informed him as well as I was able as to the probable value of the Cranes, which I estimated at Rupees 350 each. I have now to request the sanction of Government to allow Mr. Ross to have one, or at most two, of the above Cranes on payment of the sum above named.

3. The Pier Committee see no objection to two of the eight on hand being disposed of on the terms mentioned above.

No. 270. ORDER THEREON, 13th May 1862, No. 1,024.

The Government sanction the transfer to the Madras Railway Company of two of the movable Cranes supplied by the Contractor for the use of the Pier at the rate of Rupees 350 each, the Pier Committee being of opinion that they can be spared without inconvenience.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 271. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 29th April 1862, No. 13,061:—

SIR,

1. With reference to Order of Government, No. 79 of the 29th January last, I have the honor to forward a plan and an estimate amounting to Rupees 230, for nine movable screens made of teak wood framing and covered with green Merino for partitioning off certain large apartments in Government House at Madras, to form suitable rooms for Members and Assistants in the Revenue Board, the documents have received the approval of the Barrack Master and of the Revenue Board, and I recommend the work for sanction from the Reserve Fund of next year but that the work may be put in hand at once from the funds at the District Engineer's disposal.

1 Letter from the District Engineer Presidency, No. 2,802, dated 2nd April 1862.
1 Plan.
1 Estimate.
1 Specification.

2. The estimates havee been examined and found correct.

No. 272. ORDER THEREON, 13th May 1862, No. 1,025.

The Government sanction the estimate amounting to Rupees 230, submitted with this letter, for execution from the general allotment of the District Engineer Presidency for 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 273. Read the following Endorsement of the Officer in charge of the Audit and Account Departments, dated Chepauk, 25th March 1862, No. 11,896.

Read the following letter from Captain R. F. OAKES, District Engineer, Tanjore, to the Deputy Chief Engineer, Southern Circle, dated Tanjore, 4th March 1862, No. 320:—

SIR,

Letter No. 213, dated 15th November 1862.
Extract Proceedings Chief Engineer, No. 8,532, dated 19th December 1861.
Letter No. 10,020, dated 30th January from Major Rawlins.

1. With reference to the correspondence noted marginally, I have the honor to inform you that I was mistaken in stating in paragraph 4 of letter No. 213, that no advances were made to the Contractor who at first undertook the repair of the north bank of the Vettaur, east of the bridge on Road No. 36. It would appear that the person who undertook the work would not enter into a formal contract, and it was agreed that he should receive a small sum to procure materials, &c., and that when work, in excess of the advance made, had been carried out, it should be paid for from time to time on being examined and approved of by the Executive Officer. Mr. Bateman was, however, very busy in closing the breach in the Kadavayat late in March and early in April 1860, and on the solicitation of the Contractor, appears to have made a payment of Rupees 50 on the 4th April which proved to be in excess of the work done on that date, and the balance of which was recovered on the Contractor striking work unless the rates were raised.

No. 3,953 of 1859-60.
No. 603 of 1860-61.
No. 604 of 1860-61.

2. The cubes valued at Rupees 52-10-8 have been charged in the Bills which are herewith returned under the directions conveyed in paragraph 2 of Major Rawlins' letter No. 10,020.

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2 Letters and three Bills.

1. Submitted to Government with the following Bills which are recommended for sanction:—

	Amount. RS.	A.	P.	Year.
For repairing the north bank of the Vettaur in the port of Nagore... ...	871	13	2	1859-60
Do. do. do.	1,852	6	6	1860-61
Do. the left bank of do. do. on Road No. 36....................	1,951	14	10	1860-61

2. In the first of the letters recorded above (paragraph 4) the District Engineer remarked that no advances were made to the Contractor for repairs executed to the north bank of the Vettaur; but it appeared from the Bill that a sum of Rupees 31-12-9 was due by the Contractor, and the District Engineer was accordingly requested to explain the circumstances under which that amount was outstanding if no advance had been made. This inquiry elicited the explanation contained in the second of the District Engineer's letters which is therefore submitted in continuation of the first.

3. It will be observed from paragraph 2 of Captain Oakes' letter dated 4th instant, No. 320, that the value* of certain masonry cubes has been charged in the Bills now sent. These cubes were originally made for a tunnel on Trunk Road No. 36; but as explained in paragraph 2 of a letter to Government, dated 17th December 1861, No. 8,481, they were of so inferior a description that they could not be used for that work. They were, however, made use of for the repairs of the north bank of the Vettaur, and are consequently charged for in the Bills now sent; but as the charge in question was also erroneously included in the sum of Rupees 566-12-9, sanctioned in Proceedings dated 24th December 1861, No. 2,383, it is requested that authority may be granted for correcting that amount to Rupees 514-2-1, *i. e., minus* the value of the cubes, which, as above stated, were not used for the tunnel.

* Rupees 52-10-8.

RS.	A.	P.
566	12	9
52	10	8
514	2	1

4. Adverting to paragraph 5 of his letter dated 15th November 1861, No. 213, the District Engineer has been informed that though the Central Office does not question his desire to have the work under notice performed as cheaply as possible, yet it cannot consider that a sufficient reason for departing from an established rule of the Department which requires a report and the fullest information being given of the probability of a large excess over sanctioned estimates, as also the submission of a supplemental estimate when the original is found inadequate.

19th December 1861, No. 8,352.

(Signed) H. W. RAWLINS, Major,
In charge of the Audit and Account Departments.

No. 274. ORDER THEREON, 13th May 1862, No. 1,026.

1. The three Bills submitted with this Endorsement are for two works in the Tanjore District, viz. :—

	RS.	A.	P.	Year.
(a) 1st Bill	871	13	2	1859-60.
2nd Do.	1,852	6	6	1860-61.
	2,724	3	8	
(b) One Bill	1,951	14	10	1860-61.

I. Repairing(a) the north bank of the Vettaur at the port of Nagore; and

II. Repairing(b) the left bank of the same river, to the west of the bridge on Road No. 36.

2. The first work was estimated to cost 1,020 Rupees, and was sanctioned by the Collector on the 24th December 1859; the object being to restore the revetment that protects the north bank of the Vettaur, and prevents the river from disemboguing within the French territory. The actual expenditure, however, has been (871-13-2+1,852-6-6=) Rupees 2,724-3-8, or an excess over the estimate of no less than Rupees 1,704-3-8, or 167 per cent. The second work was estimated at 1,120 Rupees, sanctioned also by the Collector on the 30th March 1860, to strengthen the left bank of the same river, which is formed of very weak soil, and exposed to a severe set of the stream. The expenditure on the work has been Rupees (1,951-14-10+50=) 2,001-14-10, or an excess over estimate of Rupees 881-14-10, or 79 per cent.

3. The causes assigned for the very large excess in the first work, are insufficiency of the rates allowed for brick jelly and earthwork, the failure of the original Contractor, and the expensive mode which had to be adopted of employing daily Coolies in the absence of any Contractor willing to take up the work. The estimate was framed by the District Engineer himself, and he only allowed 4 Annas for a cubic yard of jelly on the assurance of the Assistant Supervisor (Kistnia), who then accompanied him, that the people would be only too glad to get rid of the debris of old buildings which stood in their way; but it appears that when the people found that brick jelly was really wanted, they held out for high prices, so that the jelly ultimately cost Rupee 1-4-0 and Rupee 1-10-0 per cubic yard.

4. The excess in the second work is attributed to insufficiency of the rates allowed in the estimate for earthwork, and to the expensive expedient of resorting to daily labor in the absence of Contractors. The cost of the earthwork thus fell little short of Rupee 0-3-2; but although the rates were confessedly insufficient, yet Captain Oakes admits that a cubic yard of earthwork should not have cost more than 2 Annas, notwithstanding the great demand for labor on the Railway and the high prices charged for materials.

5. The chief blame is laid upon the late Sub-Overseer McGuire, who was in immediate charge of both works. He is said to have kept his accounts in a slovenly and careless manner, and to have disobeyed the positive and repeated orders of the Executive Officer of the Range, Mr. Assistant Supervisor Bateman, in exceeding the estimated amounts. But the Government consider that Mr. Bateman, the Range Officer, who, it is admitted by Captain Oakes, entrusted his subordinate with more money than he needed for his purpose, even although he knew he was very careless with his accounts, is principally to blame. However new Mr. Bateman may have been to the Range, or however occupied he may have been on the harbour works and the Valanganni bridge, he should not have made more cash advances to his

subordinate than were sufficient to carry out the provisions of the sanctioned estimate. Government desire that the Chief Engineer will reprimand Mr. Bateman and warn him of the consequence of similar neglect of duty in future.

6. The Government consider that the District Engineer is himself also to blame in allowing so much money to be unauthorizedly spent. He admits that he was aware the estimates would be exceeded, yet he neither stopped the works, nor prepared supplemental estimates for sanction. It is true he explains that his object was to get the work done as cheaply as possible, an object which would have been defeated, he believes, had supplemental estimates been sanctioned, inasmuch as there is a tendency on the part of the Sub-Overseers, in such case, to relax their vigilance; but, as has been very properly pointed out to the District Engineer by the Central Office, the object, though good in itself, does not warrant a departure from an established rule of the Department.

7. With the above remarks the Government sanction the three bills in question, amounting respectively to Rupees 871-13-2, Rupees 1,852-6-6, and Rupees 1,951-14-10.

8. It is explained that certain masonry cubes, amounting in value to Rupees 52-10-8, had been incorrectly charged in a Bill of Rupees 566-12-9 (submitted with the Chief Engineer's letter 17th December* 1861, No. 8,451) for re-constructing a tunnel of 2 vents of 9' span each, on Road No. 36, between Negapatam and Tranquebar, whereas the cubes had been really used in repairing the north bank of the Vettaur. The charge of Rupees 52-10-8 having been now included in the Bills of the last mentioned work, the amount of the Bill for the tunnel is reduced from Rupees 566-12-9 to Rupees 514-2-1; and in modification therefore of the Proceedings of Government dated 24th December 1861, No. 2,383, the corrected amount of Rupees 514-2-1 is sanctioned as the cost of the tunnel on Road No. 36.

* Vide Proceedings of Government 24th December 1861, No. 2,383.

9. The Governor in Council is constrained to remark that the Bills which have formed the subject of these Proceedings, have been laid before Government in a very unsatisfactory manner. Owing to the imperfect nature of Major Rawlins' Endorsement, some difficulty, and no little delay, have been experienced in determining the excess above estimate in each case. The Bills should have been accompanied with the usual list, furnishing, in one view, all the information required in appropriate columns, together with an explanatory letter complete in itself instead of an ordinary Endorsement.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 275. Read the following letter from Captain W. A. BAKER, Executive Engineer, North Canara, to Lieutenant-Colonel W. H. HORSLEY, Chief Engineer and Secretary to Government, Madras, dated Camp Beitkál, 30th April 1862, No. 433.

SIR,

I have the honor to inform you that I have this day relieved Corporal J. Banks of his duties in North Canara, and have directed him to proceed to Madras.

No. 276. ORDER THEREON, 13th May 1862, No. 1,027.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information with reference to Proceedings of Government No. 479, dated 18th March 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

 Proceedings of the Madras Government, Public Works Department, 13th May 1862.

No. 277. Read the following letter from W. ROBINSON, Esq., Inspector General of M. Police, to T. PYCROFT, Esq., Chief Secretary to Government, Fort Saint George, dated Madras, 16th April 1862, No. 791:—

SIR,

1. With reference to the accompanying correspondence* and Order of Government, dated 6th February 1862, No. 178, Judicial Department, I have the honor to request the authority of Government to take charge of the buildings at Gooty, charging the Department Public Works with the cost of two Constables required for the extra duty.

* Letter from the District Engineer of Bellary, to the Deputy Chief Engineer, Central Circle, dated 10th October 1861, No. 268.
Letter from the District Engineer of Bellary, to the Deputy Chief Engineer, Central Circle, dated 25th November 1861, No. 332 (in original).

2. The inconvenient position of the public buildings in question, renders it impossible that the patrol should undertake this duty unaided.

No. 278. ORDER THEREON, 13th May 1862, No. 1,028.

1. The representation of the Inspector General Madras Police of his inability to take charge of the buildings at Gooty without extra aid will be considered in the Judicial Department.

2. It would appear sufficient for the custody of the buildings if the Police looked after them in their occasional patrols in the vicinity thereof. The charge for extra Constables cannot be undertaken by the Public Works Department.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 279. Read the following Proceedings of the Madras Government in the Military Department, dated 6th May 1862, No. 1,645:—

Approving of the estimate for effecting certain alterations and improvement to the Cook-houses of the Parcherry in Fort Saint George. } (Vide Military Proceedings, 6th May 1862, Nos. 110-111.)

No. 280. ORDER THEREON, 13th May 1862, No. 1,029.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Proceedings of the Madras Government, Public Works Department, 13th May 1862.

No. 281. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 16th April 1862, No. 12,761 :—

SIR,

1. Agreeably to the instructions contained in the Proceedings of Government, dated 5th April 1862, No. 690, I have the honor to submit for transmission to the Government of India the prescribed Tabular Statement of the two extra Accountants, whom I have recommended shall be entertained on salaries of Rupees 40 and 20 respectively, for six months, to clear off the arrears of accounts in the Madras District, and to state that the charge can be met out of the allotment for salaries and contingencies of the Department entered in the Budget of 1862-63.

2. In requesting this extra establishment temporarily in my former communication, I acted under the impression that the Government would sanction it in anticipation of the sanction of the Government of India if that sanction was requisite, and as the men were to be employed in clearing off arrears of Bills I thought the sooner their services were obtained the more advantageous they would be.

3. It is too late now for any portion of these salaries to be met from the allotments for Establishment in the current year's Budget.

No. 282. ORDER THEREON, 13th May 1862, No. 1,030.

1. Ordered that the tabular Statement prepared in the Government Office be forwarded to the Government of India, with the recommendation of this Government that sanction be granted thereto at an early date.

2. The Deputy Chief Engineer, Central Circle, is informed that in preparing Tabular Statements for temporary establishments it is not necessary to show in the column headed "present scale" the permanent establishment.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 282 A. PUBLIC WORKS DEPARTMENT.—*Statement of Temporary Establishment in*

			Year.	Charges. Ordinary.	Charges. Extraordinary.	Charges. Total.							
Extract from Home Dept. of Govt. of India. Number.	Extract from Home Dept. of Govt. of India. Date.	Office to which the proposition refers.	Nature of Charge. Present Scale.	RS.	A.	P.	Nature of Charge. Proposed Scale.	RS.	A.	P.	RS.	A.	P.
		District Engineer, Madras.					1 Extra Accountant...	40	0	0	0	0	0
							1 Do. do. ...	20	0	0	0	0	0
							Total...	60	0	0	0	0	0

FORT SAINT GEORGE,
13th *May* 1862.

this Department recommended for the sanction of the Government of India.

Proposition: Permanent: Increase per month: RS.	A.	P.	Permanent: Decrease per month: RS.	A.	P.	Temporary: Increase per month: Period.	RS.	A.	P.	Temporary: Decrease per month: Period.	RS.	A.	P.	Casual or Extraordinary.	Grounds of proposition.	Local Government's recommendation.	Orders of the Government of India: Home Department: Remarks.	Financial Department: Remarks.	Financial Department: Orders.
0	0	0	0	0	0	Six months.	40	0	0		0	0	0		This is a third class District with an Office Establishment of Rupees 339 per month. The necessity of increasing it has for upwards of two years been frequently under consideration. In 1859 Colonel Bell recommended that the District should be raised from the 3rd to 2nd class. The Government admitting the justice of the recommendation requested to be informed whether Madura or Tinnevelly could not be reduced from 2nd to 3rd class District and the saving thus effected given to the Madras District. Officers in charge of those Districts urged various reasons against reduction, and the Chief Engineer also was of opinion that no reduction was feasible. In consequence of the re-constitution of the Department of Public Works under contemplation the question was set aside for future consideration. The District Engineer now represents that the temporary employment of two Accountants on 40 and 20 Rupees each for a period of six months at an aggregate cost of 360 Rupees are essentially necessary to clear off the arrears of Bills, several of which are for works executed in 1860-61. Under these circumstances sanction is solicited for the entertainment of the two hands mentioned above at an early date. The extra expense will be met out of the sum of Rupees 16,44,500 provided for in the Public Works Budget of the next year to cover the cost of Establishment and Contingencies.	Favorable.			
0	0	0	0	0	0		20	0	0		0	0	0						
0	0	0	0	0	0		60	0	0		0	0	0						

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 283. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 24th April 1862, No. 12,907 :—

SIR,

1. With reference to Order of Government No. 579, dated 26th March 1862, I have the honor to forward the accompanying letters received from the District Engineer Presidency, applying for increased grants on account of estimates previously sanctioned in consequence of the increased rate of Teakwood in the District; and to request that the excess amounting in the aggregate to Rupees 2,370 may be authorized, the amount being available from the funds in his hands.

1 Letter from the District Engineer Presidency, No. 2,727, dated 27th March 1862, with one comparative statement.
1 Do. No. 2,760, dated 28th March 1862, with one estimate.

	RS.
Repairs to the Wallajah Baugh, total amount of estimate sanctioned Rupees 8,680, in Order of Government No. 2,340, dated 19th December 1861	620
Alterations and improvements to the Medical Stores in the Fort, total amount of estimate sanctioned Rupees 8,250, in Order of Government No. 2,352, dated 21st December 1861........	1,750
Total	2,370

2. The revised rates have been checked in this Office and corrected where necessary.

No. 284. ORDER THEREON, 13th May 1862, No. 1,031.

1. Consequent on the increased price of Teakwood at the Presidency the Government authorize the expenditure on the undermentioned works of the sums mentioned opposite to each in addition to the estimates sanctioned in the Orders marginally noted :—

No. 2,340, 19th December 1861.
No. 2,352, 21st do. do.

	RS.
Repairs to the Wallajah Baugh...	620
Alterations and improvements to the Medical Stores in the Fort...	1,750

2. The additional sums now sanctioned will be met from the General Funds at the disposal of the District Engineer Presidency.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 285. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 22nd April 1862, No. 275/Gm I.

Read the following letter from Captain C. G. PHILIPPS, Officiating District Engineer of Ganjam, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Berhampore, 7th April 1862, No. 424 :—

SIR,

1. Next to the solid satisfaction of bringing to merited punishment a delinquent member of the Department, comes that of exonerating after strict enquiry, one who is unjustly accused. With reference to the remarks which you will find in my Inspection Report for March, under date 8th to 12th, I have now the honor to forward copies of certain correspondence regarding the charges brought against Sub-Overseer Baupiah by an Inspector of Police named Snell.

2. The Inspector General's order disposing of the matter is as satisfactory as the conduct of his subordinates was the reverse, and I am inclined to believe that if all the disparaging rumors set afloat regarding the Department of Public Works, met with equal measure of enquiry, nine-tenths of them would be found to rest upon no better foundation than that which existed in this case.

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1. The accompanying letter No. 424, 7th April 1862, from the District Engineer Ganjam, is submitted for the information of Government, with reference to Government Order No. 891, 31st January 1862, in which a decision was pronounced on the case of one Baupiah, a Sub-Overseer in the Department Public Works, against whom a string of vague accusations were brought by the local subordinate authorities.

1 Letter from District Engineer Ganjam, No. 424, dated 7th April 1862.

2. On the present occasion the attempt to injure the individual in question originates with the Police functionaries, and Government will observe that it has been promptly stigmatized by the Inspector General.

3. Persecution similar to that which Baupiah has been exposed to must tend to render the public service unpopular amongst men of his class.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 286. ORDER THEREON, 13th May 1862, No. 1,032.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 287. Read the following Memorandum from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 7th May 1862, No. 294/Gm 25 :—

The Acting Deputy Chief Engineer, Northern Circle, has the honor, with reference to Government Order No. 827, of 25th April 1862, to state that the allotment of the sum of Rupees 2,680, for which sanction is solicited for the purpose of erecting Police stations and Sub-Magistrate's Kacheris in Ganjam, will be as follows :—

	RS.
To the Revenue Department for one Sub-Magistrate's Kacheri	
For two Kacheris	455
To the Judicial Department for one Police Station	910
For two Police Stations	885
	1,770
Total...	2,680

No. 288. ORDER THEREON, 13th May 1862, No. 1,033.

The Accountant General will be requested to place the sum of Rupees 910 at the disposal of the District Engineer, Ganjam, from the Reserve Fund of the current year, with a view to the construction of the two Sub-Magistrate's Kacheris referred to in the foregoing Memorandum.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 289. Read the following Proceedings of the Madras Government in the Financial Department, dated 5th May 1862, No. 333:—

Communicating Resolution of the Government of India requiring that in Reports or in Accounts in which local coin is mentioned, the equivalent amount in the Government Rupee may be inserted in the margin. (Vide Financial Proceedings, 5th May 1862, Nos. 12-13.)

No. 290. ORDER THEREON, 13th May 1862, No. 1,034.

Communicated to the Chief Engineer, the Deputy Chief Engineers Northern, Southern, and Central Circles, and to the Officer in charge of the Audit and Account Departments of the Central Office, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 291. Read the following Proceedings of the Madras Government in the Military Department:—

Communicating letter from the Deputy Adjutant General of the Army, stating that the services of Lieutenant G. E. Fryer, 21st Regiment, N. I., are available for employment in the Public Works Department. (Here enter 9th May 1862, No. 1,686.)

No. 292. ORDER THEREON, 13th May 1862, No. 1,035.

Communicated to the Chief Engineer for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 293. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 25th April 1862, No. 284/Gm 96:—

SIR,

1 Letter from Collector, Ganjam, No. 41, dated 9th April 1862.
1 Do. from District Engineer, No. 422, dated 7th do.
1 Estimate.

		RS.
Portion of Aska and Russelcondah road from Aska to Gungapur, being 12 miles, at 120 Rupees per mile.	31st May 1858, No. 1,032.	1,440
Road between Nungapur to Russelcondah on the Berhampore, Aska and Russelcondah road.	5th Aug. 1859, No. 1,875.	1,560

1. I have the honor to submit herewith for sanction an estimate amounting to Rupees 1,600 for metalling some of the worst portions of the road between Aska and Russelcondah, which is a portion of the important line extending into Sohnpoor; and which both the Collector and the District Engineer are very anxious to be allowed to put into good order before it is acted upon by the coming monsoon.

2. The traffic is fast increasing and the annual maintenance allowance does not suffice to restore portions of the road which have become considerably indented and worn.

3. It is proposed to defray the amount required out of the Reserve Fund.

No. 294. ORDER THEREON, 14th May 1862, No. 1,036.

* Rupees 1,600.

The estimate* submitted with the above letter is sanctioned. The amount Rupees 1,600 will be met from the Reserve Fund of 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 295. Read the following letter from W. FISHER, Esq., Collector of North Canara, to J. D. SIM, Esq., Secretary to Government, Revenue Department, Fort Saint George, dated Honore, 27th March 1862, No. 15 :—

SIR,

1. The Civil Auditor not being satisfied with the general authority conveyed in Extracts Minutes Consultation, respectively dated 16th February, No. 273, and 19th April 1858, No. 724, authorizing the increase of toll gates on the Devamany and Arbyle lines at the discretion of the Collector ; and no further and special sanction for the establishment of gates and the disbursement of expenses connected with them having been received, I have the honor to request that the Civil Auditor may be directed to admit the charges incurred, amounting to Rupees 1,122-9-7, under the special orders of Government.

	Establishment.			Contingencies.			Total.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Collector's Office	0	0	0	1	1	0	1	1	0
Honore........	0	0	0	69	9	4	69	9	[illegible]
Ankola..	84	6	8	12	4	7	96	11	3
Sirey..	520	5	8	24	5	5	544	11	1
Yellapúr................	394	13	4	15	11	7	410	8	11
Total...	999	9	8	122	15	11	1,122	9	7

2. In this expenditure are included charges actually incurred *Ninovember and December* 1859, whilst the receipts are only credited to the *North Canara* accounts from the 1st January 1860, the date on which they were opened, on the Province being divided into two Districts.

3. The receipts however from 1st January to August 1860, when the establishment was abolished, more than doubled the expenditure incurred within that period, and it must be observed that these gates were not erected with a view to raise Revenue, but simply for the purpose of driving off the roads a peculiar kind of cart, the solid wheels of which were highly destructive to the road surface, and consequently impeded general traffic whilst putting Government to unnecessary expense.

	R.	A.	P.
Cart fund..................................	2,076	8	0
Add			
Ferry rent...............................	2,096	15	4
Interest on account of arrears............	15	10	3
Batta for serving processes on account of arrears, &c..............................	0	2	0
Refunds of charges.........................	32	15	5
	4,222	3	0

4. The mischief done by these carts was the subject of frequent reference and correspondence, and they were finally, with the permission* of Government, prohibited the use of the roads in question altogether, and on this being done, the toll gates were abolished.

* Proceedings of Madras Government, dated 10th July 1860, No. 1,471, Public Works Department.

No. 296. ORDER THEREON, 14th May 1862, No. 1,037.

Under the circumstances stated by the Collector of North Canara, especially in paragraph 3, the Civil Paymaster is authorized to pass the charge in question amounting to Rupees 1,122-9-7 on account of the toll establishments maintained on the Devamany and Arbyle lines between November 1859 and August 1860, the same to be debited in the accounts to the proper head in communication with the Accountant General.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 297. Read the following Proceedings of the Madras Government in the Public Department, dated 16th April 1862, No. 464:—

Circulating a small Pamphlet containing instructions for preserving specimens for the Museum, and inviting the attention of the public for their co-operation in the collection of the natural products.	(Vide Public Proceedings, 16th April 1862, No. 102.)

No. 298. ORDER THEREON, 14th May 1862, No. 1,038.

Communicated to the Chief Engineer for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 299. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 16th April 1862, No. 271/K87.

Read the following letter from Captain J. BEATTY, Acting District Engineer of Kurnool, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer Northern Circle, dated Kurnool, 7th April 1862, No. 1,219:—

SIR,

Adverting to the Order of Government, No. 1,886 of 6th September 1860, and the Chief Engineer's orders thereon, I have the honor to forward you a plan of the station of Kurnool, prepared in communication with the Officer Commanding and the Civil Judge of Nundial, showing by colors, the roads to which the present allowances for repairs will be applicable on the completion of the Canal, those for which convict labor will be available, and those for which it is desirable that a maintenance allowance should be granted. The total length of road now requiring allowance is a little more than two miles, and I have the honor to recommend that Government be solicited to sanction a sum of Rupees 200 for their maintenance during the year 1862-63.

1. The accompanying letter from the District Engineer Kurnool, No. 1,219, dated 7th April 1862, applying for an annual grant of Rupees 200 for the maintenance of certain of the Contonment roads of Kurnool exhibited in the enclosed map, is submitted to Government with a recommendation that the grant sought for may be sanctioned.

1 Letter from the District Engineer Kurnool, No. 1,219, dated 7th April 1862.
1 Map.

2. The amount to be allotted out of the repair Fund for the District Engineer, for 1862-63.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle,

No. 300. ORDER THEREON, 14th May 1862, No. 1,039.

Before sanctioning the annual grant of Rupees 200, for the maintenance of certain Cantonment roads in Kurnool, the Government request that the Acting Deputy Chief Engineer, Northern Circle, will be so good as to instruct the District Engineer to show distinctly on the plan received with the foregoing letter the minor roads kept in repair from the conservancy allowance of Rupees 480, sanctioned in the orders of Government in the Military Department, No. 913 A, dated 11th March 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 301. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 15th April 1862, No. 12,716:—

4 Letters with five enclosures.
1 Extract from letters *to* and *from* the Acting Accountant General.

* No. 2,081, dated 6th October 1860.
No. 2,378, dated 17th November 1860.
No. 1,769, dated 21st September 1861.

† From Acting Head Assistant Collector in charge of South Canara, dated 16th May 1861.
From Acting Collector of South Canara, dated 4th February 1862.

‡ Herewith forwarded.

SIR,

1. With reference to the Orders of Government marginally* quoted, I have the honor to submit the accompanying letters† requesting sanction to charges incurred in the South Canara District in 1858-59 and 1859-60, on account of the establishment for the levy of tolls on Imperial lines of road, amounting to Rupees 1,146-0-7 as per Memorandum of particulars attached to a letter‡ from the Collector dated 27th June 1860.

2. In the letter from the Collector of South Canara, dated 25th July 1860, also forwarded, it is stated that the above charges were, under the directions of the Accountant General, ADJUSTED to the debit of the head " Remittances of the Public Works Department," minor head " Salaries, Establishment and Contingencies of the Public Works Department." This Office therefore thought it unnecessary to submit the Bill a second time to Government, but as the Accountant General states that the amount (Rupees 1,146-0-7) does not appear to have been debited in the accounts of the Collector to the above mentioned head, but remains unadjusted, and therefore requires the sanction of Government, the Bill is now re-submitted for that purpose.

§ No. 10,778, dated 20th February 1862.

|| No. 4,291, dated 18th March 1862.

3. Extracts of paragraphs 1 and 2 from a letter§ addressed to the Accountant General, and of paragraphs 1 and 2 of that Officer's reply,|| bearing on this subject, are also herewith forwarded.

4. I have now addressed the Accountant General to ascertain in what manner the charges in the years subsequent to 1859-60, on account of the same toll establishment, have been debited in the Collector's accounts, and whether such charges do not require the sanction of Government prior to adjustment in the public books. If a retrospective adjustment of the charges is to be made in the books of this Office, the collections relating to the same period will, it appears to me, require to be also adjusted, as otherwise certain charges will appear debited without any corresponding credit to Public Works for the revenue derived, and these charges, when set off against the allotment of funds for Public Works, will appear in excess of the same.

No. 302. ORDER THEREON, 14th May 1862, No. 1,040.

1. Under the circumstances represented, the Government sanction the Bill of Rupees 1,146-0-7 re-submitted with this letter, on account of the establishment for the levy of tolls on Imperial lines of road in South Canara in the years 1858-59 and 1859-60, and direct that the charge be debited in the accounts to the proper head, in communication with the Accountant General.

2. Adverting to paragraph 1 of their Proceedings 21st September 1861, No. 1,769, the Government would wish to know, if the Accountant General has received a definite answer to his reference to the Auditor General of India on the subject of crediting and debiting the receipts and charges of tolls and ferries.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 303. Read the following Proceedings of the Madras Government in the Ecclesiastical Department, dated 9th May 1862, No. 143:—

Requesting the Venerable Thomas Dealtry, Archdeacon of Madras, to visit the Church at Tripassore on his return to Madras and submit a report with respect to the repairs necessary to the same. } (Vide Ecclesiastical Proceedings, 9th May 1862, Nos. 7-8.)

No. 304. ORDER THEREON, 14th May 1862, No. 1,041.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 305. Read the following :—

No. 12,910.

List of Bill received from the District Engineer, Madura, submitted for the sanction of Government, which exceed its estimate by more than 5 per cent.

Audit No.	Date of Bill.	Description of work.	Amount of Estimate.	Amount of Bill.			Excess.			Per centage of Excess.	To what year expenditure appertains.	Remarks.
	1862.		RS.	RS.	A.	P.	RS.	A.	P.			
162	Feb. 24th	4th part or final Bill for constructing Moonsiff's Court House at Dindgul estimate sanctioned by Government on the 16th September 1857.	......	363	15	0	......	...	...	......	1861-62	The original estimate for this work was framed in May 1857, since which time the price of materials and labor has risen. A supplemental estimate of Rupees 230, was forwarded to this Office on the 28th September 1861, but the work had then been completed and a Bill was therefore called for.
		Add the amount 1st, 2nd and 3rd part Bills already passed by the Chief Engineer on the 31st January 1860, 8th April 1861, and 28th March 1862......	......	1,323	12	0	......	...	...	......	....	From a comparative statement prepared in this Office, showing the items in which the estimate has been exceeded, it has been ascertained that the excess is due entirely to increased rates.
		Total Rupees...	1,500	1,687	11	0	187	11	0	$12\frac{1}{2}$		

Central Office of Public Works,
Chepauk, 24th April 1862.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In charge of the Audit and Account Departments.

No. 306. ORDER THEREON, 14th May 1862, No. 1,042.

The Bill submitted with this list is sanctioned.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 307. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 25th April 1862, No. 12,948.

Read the following letter from Captain R. F. OAKES, District Engineer of Tanjore, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Tanjore, 14th April 1862, No. 376:—

SIR,

1. With reference to your Order No. 11,975, dated 25th ultimo, on the Proceedings of Government, No. 496, dated 20th idem, I have the honor to submit the Statement of the actual loss caused by the rain in February last as directed therein.

2. A large quantity of unburnt bricks were destroyed both at the lower Anicut and the Nasuniyar Bridge works in Pathikoter, but in both cases the Contractors suffer the loss, and it was necessary under the circumstances to extend the period of their contracts for supplying the bricks.

3. The actual loss as shown in the statement is not considerable, but the effect of rain on the works in progress throughout the District has been very injurious, as the works generally have been very considerably retarded, and nearly a month of the working season has been lost.

4. The roads throughout the District were much cut up, but it is not possible to calculate with accuracy the money value of the injury done.

Statement of the actual loss caused by the untimely fall of rain during the month of February 1862.

Works damaged.	Amount of loss. RS.	A.	P.	Remarks.
10¼ Squares of the plastering jelly work on the Citadel Ramparts at Tranquebar.	25	0	0	
Restoring temporary embankment thrown in front of the bridge work on road No. 8 across the Nasuniyar.	29	7	6	The embankment was bodily carried away by the heavy flood which came down the Nasuniyar, which is a large drainage stream.
Clearing the excavations for foundation of the south abutment piers, retaining walls and floor of the above bridge..	45	6	6	The excavations were much silted up.
Repair of Roads Nos. 15 and 23 on emergency in Manargudi.	392	0	0	These roads were repaired prior to the rains in February or immediately after the last monsoon, but were cut up into deep ruts during the rain and became almost impassable.

District Engineer's Office,
Tanjore, 14th April 1862.

(Signed) R. F. OAKES, Captain,
District Engineer.

1 Original letter No. 376, dated 14th April 1862, with one enclosure.

1. Submitted for the information of Government, with reference to their Proceedings No. 496, 20th March 1862.

2. Government will observe that the Contractors suffer the loss of the large quantity of unburnt bricks destroyed by the latest rains at the lower Anicut and the Nasuniyar bridge.

3. The actual loss as shown in the accompanying statement is not considerable, but the progress of the works throughout the District, Captain Oakes reports, has been considerably retarded, and the roads have been much cut up.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle

No. 308. ORDER THEREON, 14th May 1862, No. 1,043.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 309. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 17th April 1862, No. 272/N 101 :—

SIR,

1. I have the honor to submit for the orders of Government the accompanying papers from the District Engineer of Nellore, reporting the occurrence of two accidents at the Pennár Anicut on the 18th February and 2nd March 1862, which resulted in the death of two persons, an old woman and a cooly.

1 Letter No. 694, dated 8th April 1862, with two accompaniments.
1 Do. dated 22nd March 1862, No. 558.
1 Do. dated 11th Feb. 1862, No. 285, with one accompaniment.

2. In the case of the woman it appears that while standing on the wing wall of the bridge over the Végur Channel to allow certain trucks to pass, a plank of the second truck struck her off the wall into the channel, causing the fracture of both wrists, three or four ribs, and it is believed one leg, from which injuries she eventually died. The woman is said to have admitted that the accident was due to her own carelessness, and as she did not belong to the works her case was reported to the Magistrate for enquiry, the result of which has not yet been communicated to the District Engineer.

3. As respects the cooly, he is stated to have been engaged in pushing the foremost of a line of loaded trucks at the Anicut, when another truck which was behind him, and which was also being pushed by coolies, inflicted a severe contusion of the right foot and ankle; at first the injury was not considered dangerous and consequently was not reported to the Civil authorities; but on the 20th of March the man died in Hospital.

4. No inquest was held on the body owing apparently to the District Engineer not hearing of the death until some days after it took place. It seems therefore desirable, as suggested by Captain Mullins, that the required report in such cases should go direct from the Hospital to the Civil authorities; and I recommend that the Medical Department should be instructed accordingly. I must, however, remark that the accident should have been reported to the Collector or to one of his subordinate Officers at the time it occurred, agreeably to paragraph 4, Chapter X of the New Code. One of the reasons assigned by the District Engineer for the omission is that "as yet the New Code is almost unknown, there being but five copies of detached portions in "the several Offices of the members of the Engineering Establishment." Upon this I must however remark that the rules relating to the course to be followed on the occurrence of an accident, were promulgated to the Department so far back as April 1856, and are entered in pages 224 and 292 of the Circular Order Book. I have now called upon the District Engineer to report what additional number of Chapters of the New Code he requires for the use of the members of the Department employed under his orders.

5. The accident to the cooly, Captain Mullins reports, was undoubtedly caused by carelessness; and subsequently all the breaksmen were assembled by his order, and warned that they would "at once be dismissed if seen to be negligent even though no accident might occur."

6. I submit an application for the grant of a gratuity of Rupees 20 to the son of the deceased, together with the proceedings of Lieutenant Smith, 2nd Assistant District Engineer, who enquired into the claim made thereto. The deceased appears to have left a widow and two children destitute, and as the claim of the son seems to have been already established, I recommend that sanction may be granted for its recognition.

7. Besides the two accidents above adverted to, it will be observed from paragraph 3 of the District Engineer's communications dated 22nd March 1862, No. 558, and that Officer's letter of the 11th February 1862, No. 285, that another accident occurred at the Anicut works on the 6th of the latter month, whereby a cooly was so injured as to necessitate the amputation of his leg. This man is said to have injured himself by endeavouring to get up on a truck while it was in motion; his foot slipped while in the act of attempting this, and the front wheel went over his leg below the knee.

8. These accidents are much to be regretted; particularly as prior to their taking place such occurrences are said to have been very rare.

No. 310. ORDER THEREON, 14th May 1862, No. 1,044.

1. Of the two fatal accidents at the Pennár Anicut reported above, the death of the woman who was knocked off the wing wall of the bridge over the Vegur Channel, by a plank projecting from one of a train of passing railway trucks, was entirely the result of her own carelessness. She did not belong to the working party, and was attempting to cross the bridge, when the trucks came up on their return to the quarries; and although she endeavoured to get out of the way, she did not withdraw herself sufficiently far to clear the train altogether. It is said that before she died, she admitted that the accident was due to her own neglect of the warning given her to stand further away.

2. The second accident which ended in the death of a Mahomedan cooly employed on the works, was also the result of carelessness, but apparently not of the man himself. He was engaged in pushing the foremost of a line of loaded trucks, when the one next to him was pushed by the coolies behind on his right foot and ankle, inflicting so severe an injury as to cause the man's death 18 days after the accident. The deceased has left a widow and two young children, who are said to have been entirely dependent on him; and under the provisions of Rule II, paragraph 7, Chapter X of the New Public Works Code, application for a gratuity of 20 Rupees is submitted on behalf of the deceased's son, a lad 12 years of age.

3. As the claim to this gratuity has been clearly established, the Governor in Council authorizes the payment of 20 Rupees to Mahomed Yacoob, son of Mahomed Sullimon, the deceased cooly abovementioned. The amount of the daily wages drawn by the deceased is not mentioned, so that it cannot be ascertained how the gratuity has been calculated; but supposing that the maximum limit of six months' wages has been adopted, the man's hire, at 20 Rupees for six months, must have been about 1¾ Anna a day.

4. Adverting to the District Engineer's remarks in paragraph 3 of his letter dated 8th April 1862, No. 694, regarding the difficulty of carrying out the provisions of paragraphs 4 and 5 of Chapter X of the Code in the case of injured men dying in Hospital during the absence from the spot of the Engineer Officer, the Government approve the suggestion which is supported by the Acting Deputy Chief Engineer, that the report required in such cases should go direct from the Medical Officer in charge of the Hospital to the Civil authorities, in view to the necessary inquest being immediately held: instructions will be issued accordingly to the Medical Department, through the Public and Military Departments to whom these Proceedings will be communicated.

5. The Deputy Chief Engineers of Circles will caution all Officers having charge of large works within their respective Circles, to see that the utmost care is taken to prevent the occurrence of similar unfortunate accidents in future.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 311. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 6th May 1862, No. 189:—

SIR,

I have the honor to report for the information of Government that, in accordance with the Proceedings of Government, 13th September 1860, No. 1,352, A. Soobramaniam Mudalliar, on the recommendation of the District Engineer of Cuddapah, was appointed in October 1861, a temporary Sub-Overseer, 2nd Class 3rd Grade, for a period of six months; the above time having expired on the 1st April 1862, Captain Hemery requests permission to retain Soobramaniam's services, for a further period of six months on the grounds that he has given satisfaction in the discharge of the duties entrusted to him, and that his entertainment is imperatively necessary until the restoration of the Anantorary tank is completed, and there being no passed Candidate available, I recommend that the District Engineer's request may be complied with.

No. 312. ORDER THEREON, 14th May 1862, No. 1,045.

1. Before passing orders on this letter the Government would wish to be informed of the conduct of temporary Sub-Overseer A. Soobramaniam Mudali during the past six months.

2. The Government have already in their Orders No. 98, dated 31st January last, requested that in submitting applications similar to that under notice, information should invariably be afforded as to whether the individual concerned performed his duties satisfactorily and conducted himself well during his previous employment, and they desire that this order may be strictly adhered to.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 313. Read the following letter from Colonel-Commandant H. B. TURNER, Acting Secretary to Government of Bombay, to the Secretary to the Government of Madras, dated Bombay Castle, 29th April 1862, No. 2,439 :—

SIR,

1. The Government of India having intimated the transfer of North Canara to the Bombay Presidency, with the exception of Condapoor, I am directed to convey the request of His Excellency the Governor in Council, that the Government of Madras will be so good as to appoint an Officer to take charge from Captain Baker of the Public Works in the Condapoor Táluq.

2. I am at the same time desired to intimate that the Bombay Government no longer require, and are prepared to re-transfer to the Madras Government, the services of Mr. Powell, of whose Executive charge Condapoor had hitherto formed a part.

No. 314. ORDER THEREON, 14th May 1862, No. 1,046.

1. Communicated to the Chief Engineer and to the Acting Deputy Chief Engineers Northern and Central Circles for information.

2. The Chief Engineer will be good enough to instruct Lieutenant-Colonel Walker, Acting District Engineer, South Canara, to take charge of the Condapoor Táluq in the North Canara District, from Captain Baker of the Bombay Public Works Department.

3. A communication will be addressed to the Bombay Government, pointing out that no provision has been made in the Public Works Budget of this Presidency for the current year either for Public Works, Executive or Office establishments in the Condapoor Táluq, and that Government will be requested to make over to this Presidency the sums allowed in its Budget under these heads.

4. The Chief Engineer will be good enough to report what establishment (Executive and Office) will have to be provided in future Budgets for the Condapoor Táluq. Mr. Powell, will continue in charge of this Táluq until further orders.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 315. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, Fort Saint George, to the Acting Secretary to the Government of Bombay, D. P. W., dated 14th May 1862, No. 1,047.

SIR,

1. With reference to your letter No. 2,439, dated 29th April 1862, I am desired by His Excellency the Governor in Council to state that the Chief Engineer Madras, has been requested to instruct Lieutenant-Colonel Walker, Acting District Engineer South Canara, to take charge of the Condapoor Táluq in the North Canara District from Captain Baker of the Bombay Public Works Department. Mr. Powell, whose services are re-placed at the disposal of this Government, will be directed to continue in Executive charge.

2. At the same time I am desired to draw the attention of your Government to the fact that no provision has been made in the current year's Budget of this Presidency either for Public Works, Executive or Office Establishments in the Condapoor Táluq, and further to request that the sums provided in your Budget under these heads may be made over to this Government.

3. I am also desired to request that this Government may be furnished with full details of the sums provided in your Budget, under all heads, for expenditure in the Condapoor Táluq during 1862-63.

No. 316. Read the following letter from C. W. READE, Esq., Collector of South Arcot, to J. D. SIM, Esq., Secretary to Government, Revenue Department, Fort Saint George, dated South Arcot, 22nd April 1862 :—

SIR,

1. I did not feel at liberty to raise my voice in objection to the removal of Captain Foord, the Engineer of this District; and of course unsolicited by Captain Foord, I could hardly have ventured to move in the matter, as for aught I know the arrangement might have been in accordance with Captain Foord's own views and wishes. I felt much regret, however, at his transfer to Tanjore, and I have now ascertained from himself that the change is to him very distasteful. Since Captain Foord's removal, Mr. Norfor has left the Department for his appointment as Emigration Agent at Pondicherry; thus two experienced Officers of this important Department have been suddenly withdrawn at a season when their presence was perhaps more needed than at any other, and when unfortunately I am myself only just arrived in the District. I had hoped in communication with Captain Foord to have undertaken and carried out various projects and works of improvement connected with irrigation, on the completion of which the Government revenue and the people would have alike benefited.

2. There are new works at present under construction and others recently sanctioned of far more importance I believe, both as to their cost to Government and to their effects on the future prosperity of the District, than any that are in hand in the District of Tanjore; so that, if I may be permitted to express an opinion, the services, at this time, of Captain Foord are really far more required in this District than in Tanjore, while his great experience in the former, and his intimate acquaintance with the people and their requirements in connection with the Public Works Department, seem to me to point to the very great desirableness of retaining Captain Foord in South Arcot, at all events pending the settlement of a variety of questions which had already engaged my attention, and respecting which Captain Foord and myself had been in correspondence.

3. I had also hoped to have visited several localities throughout the District in company with Captain Foord, and to have had his co-operation in effecting various works of public utility to be paid out of the Local Funds. With his removal I had for the time abandoned the projects I had in view, and just as I was about to visit that part of the District over which Mr. Norfor presides as Engineer, and where also irrigation works are going on, that Officer has been suddenly taken away, and I am forced to postpone all the advantages I had contemplated by a personal conference with these two experienced Officers in my present tour of the District on the settlement duty.

4. I hope it may yet be in the power of Government to make some other arrangement by which this District may not be deprived of the services of Captain Foord just at this period, and when, too, his presence is of necessity peculiarly valuable to me, who am altogether new to the District, and I would especially urge my request because of the still more recent removal of Mr. Norfor, in whose place no one has yet been appointed.

No. 317. ORDER THEREON, 14th May 1862, No. 1,048.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 318. Read the following Proceedings of the Madras Government in the Financial Department, dated 9th May 1862, No. 342 :—

Forwarding copy of a Circular requiring the submission of certain information in applications for sanction of expenditure of any kind. } (Vide Financial Proceedings, 9th May 1862, Nos. 26-27.)

No. 319. ORDER THEREON, 14th May 1862, No. 1,049.

Communicated to the Chief Engineer, Deputy Chief Engineers Northern, Southern, and Central Circles, Officer in charge of the Audit and Account Departments of the Central Office, and to the Consulting Engineer Irrigation and Canal Company, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 320. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 29th April 1862, No. 13,072.

From Captain J. GODDARD, District Engineer Coimbatore, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Ootacamund, 15th April 1862, No. 684.

SIR,

1. In your order No. 11,656, dated 19th March 1862, you communicate for my information Proceedings Madras Government No. 399, dated 10th March 1862, sanctioning cost of construction of Wells and Latrines by Collector at Ootacamund. The amount sanctioned is Rupees 520.

2. In accordance with the order of Government, the Accountant General communicated to the Collector the requisite advice to place the above amount at my disposal, which was duly intimated to me by Officer in charge of the Account and Audit Department, Central Office Public Works, in his Endorsement No. 11,766, dated 21st March 1862.

3. Upon receipt of the above endorsement I immediately furnished to the Collector, under Rules, a "general abstract," a "letter of credit," and a "draft" for Rupees 520, and debited and credited the amount in my Account Current for the current month.

4. The Collector in acknowledging receipt of the above informs me, he only requires Rupees 170 of the above amount, and proposes to return Rupees 350 to me, and retain Rupees 170, as explained in the enclosure marginally* indicated.

* Collector's letter No. 106, dated 11th April 1862.

5. I have informed the Collector that I have debited him with Rupees 520, and have sought your orders, and accordingly beg that you will obtain the sanction of Government for the disposal of the Rupees 350 above adverted to.

6. The Collector might advantageously expend the amount in famine relief, and I have the honor to suggest this course for adoption.

From E. B. THOMAS, Esq., Collector of Coimbatore, to Captain J. GODDARD, District Engineer of Coimbatore, dated Ootacamund, 11th April 1862, No. 106.

SIR,

1. I have the honor to acknowledge your letter of the 3rd instant, No. 461, giving cover to a General Abstract, a Letter of Credit and a Draft, all for Rupees 520 in my favor, being the cost of erecting three Latrines over the main running stream at Ootacamund, and half the cost for constructing four new Wells as per sanction of Government No. 399, dated 10th March 1862.

2. In reply, I beg to inform you, that on perusal of the Government order in question, I find that this sanction has been granted on my letter of the 23rd January 1862, No. 3. The three Latrines alluded to in the above letter, were the same referred to in my previous letter to Government, dated 15th August 1861, No. 43, and for which sanction was accorded in Government Order of the 31st December 1861, No. 2,504, communicated to me in your Memorandum under date 12th February 1862, No. 404. You will be aware that the money for this work, viz., Rupees 350, has been already paid to me included in the sum of Rupees 550, for which you

sent me a draft with your letter of the 29th January 1862, No. 377, and a portion of which, or Rupees 147 was also returned to you, as requested in your Memorandum of the 13th February 1862, No. 406, being the amount payable by the inhabitants.

3. Under these circumstances, you will observe that the present sanction for 350 Rupees is unnecessary. The only amount due to me is the 170 Rupees, being half the cost for constructing four new Wells. I would therefore retain this sum, and return Rupees 350, if you wish me to do so, or you had better send me a fresh draft for 170 Rupees only, and I will return you the present draft, and other papers received with your letter under acknowledgment.

4. An early reply is requested.

(True Copy.)

(Signed) J. GODDARD, Captain,
District Engineer Coimbatore.

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1 Original letter No. 654, with one enclosure.

1. Submitted for the information of Government, with reference to their Proceedings No. 399, dated 10th March 1862.

2. Government will observe that as the cost for erecting three Latrines, having already been sanctioned in their Proceedings No. 2,504, dated 31st December 1861, the amount (Rupees 350) subsequently sanctioned* for the same purpose is not required. The District Engineer therefore states, that the Collector might advantageously expend the sum, viz., Rupees 350, in famine relief, and suggests this course for adoption.

* Proceedings of Government No. 399, dated 10th March 1862.

3. Under these circumstances the Deputy Chief Engineer Southern Circle has informed the District Engineer, by a Telegram dated the 25th instant, that the above amount may be expended by the Collector in the manner suggested, and which he trusts will meet with the approval of Government.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 321. ORDER THEREON, 15th May 1862, No. 1,050.

1. The Government approve of the proceedings of the Deputy Chief Engineer, Southern Circle, as reported in the foregoing Endorsement.

2. The sum of Rupees 350, if not expended before the close of 1861-62 will not be available during the following year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 322. Read the following letter from Captain W. A. BAKER, Executive Engineer, North Canara, to the Chief Engineer and Secretary to Government, Madras, dated Camp Beitkál, 30th April 1862, No. 429:—

SIR,

I have the honor to inform you that I have this day relieved Captain G. A. Searle, 35th Regiment, Madras Native Infantry, of his duties as an Assistant Engineer in North Canara, and have directed him to proceed to the Godavery District and report himself to the District Engineer.

No. 323. ORDER THEREON, 15th May 1862, No. 1,051.

Communicated to the Chief Engineer and Acting Deputy Chief Engineers Northern and Central Circles, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 324. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 23rd April 1862, No. 279/Kr 103 :—

SIR,

1. I have the honor to submit herewith for the consideration of Government Estimates amounting to Rupees 8,290 accompanied by plans and the requisite documents relating to a project brought forward by the District Engineer Kistna, for permanently improving the supply of water to the Boomy Codu and to various subordinate channels of irrigation in the Delta of that river.

1 Letter from District Engineer Kistna, No. 224, dated 26th March 1862, with one enclosure.
1 Do. from Collector, No. 57, dated 21st March 1862.
1 Abstract Estimate.
2 Specifications.
4 Plans.

2. Major Anderson in his letter No. 224, submitted herewith, explains that towards the end of the rainy season the Ryots cultivating under these channels, can only make sure of the necessary supply by throwing earthen bunds, or embankments, across the stream ("Boodemair") from which their water is received; and as the temporary expedients are naturally most ineffectual, a resort to more permanent measures has become necessary to maintain the revenue at its full amount. It is further shown that the opening of the channel called "Ryves' channel" will have the effect of diverting a considerable portion of the volume of water which at present enters the "Boodemair," to the extent, it is calculated, of fully ⅘ths; and it will hence be seen that the necessity of adopting steps to economize its resources has become imperative.

3. With this view Major Anderson proposes to carry the head of the channel 4 miles higher up the supplying stream, excavating a new course to that extent, and constructing a substantial masonry Calingulah across the "Boodemair." The cost of these works together with that of some subordinate Head sluices is estimated at Rupees 8,290, and as the estimates are economically framed and the project, in my opinion, very judicious, and indeed necessary in its provisions, I beg to recommend that sanction be accorded for the outlay.

4. Major Anderson proposes to meet the charge, if sanctioned, by an allotment of half the amount from the Repair Fund (Irrigation), and the remainder could be defrayed out of the District Reserve.

No. 325, ORDER THEREON, 15th May 1862, No. 1,052.

1. With the above letter the Deputy Chief Engineer, Northern Circle, submits plans and estimates amounting to Rupees 8,290 for improving the supply of water to certain minor channels of irrigation, which have hitherto been fed from the Boodemair, now the main drainage channel in the Kistna scheme.

2. The arrangements are necessary in consequence of the new channels lately excavated drawing off the greater portion of the water which formerly passed down the Boodemair, and so lowering its surface level.

3. The Government accordingly sanction the estimates amounting to Rupees 8,290, which sum, it is observed, the District Engineer proposes to meet from the General Funds at his disposal in the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 326. Read the following Endorsement of the Chief Engineer, dated Chepauk, 5th October 1861, No. 5,593.

Read the following letter from Captain W. FAREWELL, Executive Engineer, Wellington, to Deputy Chief Engineer, Southern Circle, Madras, dated Wellington, 10th September 1861, No. 69 :—

SIR,

1. With reference to the Proceedings of the Madras Government, No. 1,427, dated 1st August 1861, together with your Order thereon No. 3,922, dated the 14th idem, I have the honor to enclose a Statement, showing the amount of the several advances made to Mr. R. Vigor prior to and after the fall of the bridge, as also on what account the payments were made.

2. Mr. Vigor contracted to build a block of Married Men's quarters as well as the bridge, and both works appear to have been in progress at the same time. After the fall of the bridge I understand that Mr. Vigor was released from his contract to complete a block of Married Men's quarters, and Colonel Lawford settled Mr. Vigor's accounts; I append a corrected copy of Colonel Lawford's settlement statement, as also a copy of his letter to the Chief Engineer on the subject.

3. The accounts of the Waterloo bridge and the block of the Married men's quarters were settled at the same time, money being due to Mr. Vigor on one account and due by him on the other. The plant, such as brick moulds, pug mills, lime mills, tools &c., and bricks on the ground and other stores used by him on both works were valued, and the amount of their values credited to Mr. Vigor in closing his accounts. The confusion in these accounts appears to me to arise from these materials and stores having been credited to Mr. Vigor in both the accounts part in one and part in the other. I will therefore make a Statement of both accounts in one as follows:—

	Rs.	A.	P.		Rs.	A.	P.
Cash paid to Mr. Vigor for Waterloo bridge, vide Statement... ...	20,134	5	4	Value of work done to Waterloo bridge, vide Statement marked D........................	23,744	13	10
Cash paid to do. for a block of Married Men's quarters, vide Statement B........................	12,130	0	0	Value of work done to Married Men's quarters, vide Statement E........................	4,366	11	2
Materials supplied to Mr. Vigor from these works, vide Statement C........................	1,610	0	0	Value of stores and bricks, vide Colonel Lawford's Statement marked F, and Statement G....	5,494	13	7
				Cash paid by Mr. Vigor for bricks........................	16	0	0
				Cash paid by Mr. Vigor to close his accounts...	251	14	9
Total......	33,874	5	4	Total......	33,874	5	4

Separating the account and crediting materials only in one they stand thus:—

WATERLOO BRIDGE.

	Rs.	A.	P.		Rs.	A.	P.
Cash paid to Mr. Vigor...	20,134	5	4	Value of work done......	23,712	13	10
Due to Mr. Vigor........................	3,610	8	6	Stampt paper...	32	0	0
Total......	23,744	13	10	Total......	23,744	13	10

MARRIED MEN'S QUARTERS.

	Rs.	A.	P.		Rs.	A.	P.
Cash paid to Mr. Vigor	12,130	0	0	Value of work done......	4,366	11	2
Materials supplied, vide Statement C........................	1,610	0	0	Plant and stores, vide Statements F and G........................	5,494	13	7
				Cash paid by Mr. Vigor	267	14	9
				Amount due to Mr. Vigor on Waterloo bridge........................	3,610	8	6
Total	13,740	0	0	Total......	13,740	0	0

The amount billed under the head of Waterloo bridge amounts to—

	Rs.	A.	P.
1st Part Bill........................	16,907	15	4
2nd do.	3,226	6	0
3rd do.	3,862	7	3
Total......	23,996	12	7

The last or 3rd Part Bill for Rupees 3,862-7-3 was for the amount paid on the settlement of Mr. Vigor's accounts from the balance due by him to Married Men's quarters, but the sum of Rupees 251-14-9 cash paid by Mr. Vigor to Married Men's quarters was erroneously added in the Bill and not deducted as it should have been, a fresh Bill is therefore submitted, making the total expenditure 1st, 2nd and 3rd Part Bills amount to 23,744-13-10; the amount shown as expend-

ed on the bridge, why any work was done after the bridge fell or under what authority I am unable to state, the whole transaction having occurred previous to my taking charge of the works, and there being no records on the subject in my Office.

4. I trust that the explanation I have above given will be considered satisfactory.

(Signed) J. GODDARD, Captain,
District Engineer, Coimbatore.

Enclosures 10 in original.

1. Submitted to Government, with reference to their Proceedings dated 1st August 1861, No. 1,427.

2. The total expenditure on the Waterloo bridge, as shown in Colonel Birdwood's letter of the 29th May last, No. 1,017, was Rupees 23,995-12-7, but Captain Farewell states that Rupees 251-14-9 were erroneously added to the Bills, that sum having been paid in cash by Mr. Vigor in the adjustment of his accounts in connection with the Married Men's quarters. The correct expenditure on the bridge will, therefore, be Rupees 23,744-13-10.

3. Adverting to paragraphs 1 and 4 of the Proceedings of Government above quoted, it will be observed from Colonel Birdwood's Official Memorandum, dated 16th July 1861, No. 2,770, that the sum of Rupees 3,862-7-3 represents the amount of advances received by Mr. Vigor on account of the Married Men's quarters, and not worked out by him. When he was released from the contract for these quarters on the fall of the Waterloo bridge, and when the adjustment of his accounts in connection with the said bridge was ordered in Extract Minutes Consultation dated 12th April 1859, No. 864, the above sum of Rupees 3,862-7-3 (or rather Rupees 3,610-8-6, balance against him for Married Quarters *plus* Rupees 251-14-9 paid by him in settlement of account) was transferred to him as an equivalent for cash for work actually performed in the construction of the bridge, as will be seen from the Statement embodied in Captain Farewell's letter now sent.

Paragraph 2.

4. Referring to paragraphs 2 and 3 of the Proceedings of Government under reply, the Chief Engineer begs to explain that the amount of the contract entered into with Mr. Vigor for the bridge was Rupees 19,716, and the reason of the excess amount paid to the Contractor is owing to his having executed work after the fall of the bridge. The authority for this proceeding is explained in the following terms by Mr. Vigor in his letter to Captain Campbell dated 29th March 1859, which formed an accompaniment of Colonel Faber's letter to Government, dated 5th April 1859, No. 9,335:—"I was re-constructing the bridge at my own risk "depending on the justice of Government, and the instructions and promises I had received from "Colonel Faber." Moreover, in Extract Minutes Consultation, dated 18th February 1859, No. 407, paragraph 6, the Government had decided on holding Mr. Vigor to his contract, and as he had in some measure accepted his responsibility for the failure, having declared his willingness to bear a portion of the expense of re-constructing the bridge, there is sufficient authority for the outlay by Mr. Vigor subsequent to the fall of the bridge; and by ordering Mr. Vigor's release from the bridge contract, and the adjustment of his account, the Government virtually consented to pay the Contractor for work done up to the time of the release, seeing that they were aware that the bridge was being re-built.

Extract Minutes Consultation, dated 12th April 1859, No. 864.

5. The only point that remains unexplained not only in Captain Farewell's letter now sent, but also in the lengthy correspondence which took place on the subject at the time of the fall of the bridge, is why a sum of Rupees 301 was advanced to Mr. Vigor in excess of his contract prior to the fall of the bridge, especially as the structure was not completed; but the presumption is that as Captain Campbell was of opinion that the rates allowed in the estimate were insufficient, he considered Mr. Vigor entitled to the money, and Statement D accompanying Captain Farewell's letter recorded above, shows that work had been performed to the extent of the advances made.

RS.	
20,017	Paid.
19,716	Contract amount.
301	

Paragraph 9 of Extract Minutes Consultation dated 18th February 1859, No. 407.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 327. ORDER THEREON, 15th May 1862, No. 1,053.

1. The Government having in their Proceedings of the 1st August 1861, No. 1,427, called for further explanation in respect to the payments made to Mr. Vigor, who had contracted to build the Waterloo bridge at Jackatalla, and which fell down before it was quite completed, the Chief Engineer submits with the above Endorsement all the information that is now available on the subject.

2. The three points which the Government could not understand were, why advances were made to the Contractor after the fall of the structure, why the total of these advances was allowed to exceed the amount of the contract, and why another sum said to be due by Mr. Vigor for work which he failed to perform in connection with the Married Men's quarters, was nevertheless transferred to him in adjustment of his accounts in the matter of the bridge. With the aid of the further papers now placed before them, the Government learn the following particulars.

3. Mr. Vigor contracted to build the Waterloo bridge for 19,716* Rupees, and appears to have held a second contract about the same time for building a block of Married Men's quarters at Jackatalla. He failed in one contract, and was released from the other and the confusion that followed (in all probability) resulted from the fact of both accounts being settled at the same time, money being due to Mr. Vigor on one account, and due by him on the other. When both the contracts were taken out of his hands, he had been paid Rupees 20,134-5-4 on account of the Waterloo bridge, and was indebted to Government to the extent of Rupees 3,610-8-6† for work he had failed to do on the Married Men's quarters, but he was allowed to retain this sum in adjustment of his accounts in connection with the Waterloo bridge, on which he had been permitted to perform additional work after its fall. Thus Mr. Vigor received Rupees 23,744-13-10 in all for the Waterloo bridge, or Rupees 4,028-13-10 in excess of his contract, but it is urged on the other hand that he did really do work to the bridge to the full value of Rupees 23,744-13-10.

	RS.	A.	P.
Received............	23,744	13	10
Contract............	19,716	0	0
Excess............	4,028	13	10

* Not 19,000 Rupees as previously stated.

† Not Rupees 3,862-7-3 as previously reported to Government.

4. The reason given for allowing Mr. Vigor to continue work and to spend money on the bridge, viz., his own statement to Captain Campbell (then the Executive Officer) that he was re-constructing the bridge *at his own risk*, depending on the justice of Government and the instructions and promises of Colonel Faber, is not very conclusive; but as the orders of Government directing‡ that Mr. Vigor's "accounts be at once adjusted, and that he be then released from "further responsibility in connection with the bridge contract," may very probably have been construed into an expression of their consent to pay the Contractor for work done by him up to the date of his release, and further, as Captain Campbell, on whom the chief blame lay, has been removed from the Department, the adjustment already effected must be allowed to stand. The whole transaction shows great want of management on the part of those who were connected with it. The Government have had to pay from first to last Rupees 23,744 for a bridge which has never been completed. It will be the duty of the Chief Engineer to prevent a recurrence of much mismanagement and consequent loss to Government.

‡ Proceedings 12th April 1859, No. 864, paragraph 5.

5. The first part bill of Rupees 16,907-15-4 for the bridge having been already passed§ in the Central Office, the expenditure remaining to be sanctioned by Government is Rupees 6,836-14-6; but as the Chief Engineer now submits a revised bill for the entire amount of Rupees 23,744-13-10 the Government sanction this latter amount in supersession of the sanction to a part of the expenditure (as above noticed) in the Central Office. The Government understand that the present transaction is simply a matter of account, and that it does not involve any further cash payments, Mr. Vigor having been already paid the full value of the work done by him on the Waterloo Bridge.

§ *Vide* letter from Officer in charge of Central Office, 29th May 1861, No. 1,017.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 328. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 24th April 1862, No. 280/N.107.

From JOHN MILLER, Esq., Acting Government Solicitor, Madras, to the Deputy Chief Engineer, Northern Circle, dated Madras, 31st March 1862, No. 169:—

SIR,

Dated 28th March 1862, No. 602, Public Works Department, Public.

With reference to the Proceedings of Government, noted in the margin, I shall be happy to advise you on the subject therein adverted to, as soon as I am furnished with all needful information and instructions.

From Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to J. MILLER, Esq., Acting Government Solicitor, Madras, dated 3rd April 1862, No. 213/N 107.

SIR,

1. In reply to your obliging communication of yesterday's date, I have the honor to inform you that I have only delayed applying to you upon the subject of the order of Government, No. 605, under date 28th March 1862, until I obtained possession of the Covenant of Mr. Merrall with Her Majesty's Government, for which document I applied to the Officiating Civil Paymaster on the 2nd instant.

2. As soon as it is received in this Office I shall have the honor of communicating with you further on the subject.

From Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to J. MILLER, Esq., Solicitor to Her Majesty's Government of Fort Saint George, dated 10th April 1862, No. 224/N 107.

SIR,

* 2nd April 1862.

With reference to your letter as per margin,* I have the honor to forward herewith for your consideration the original Covenant under which Mr. E. E. Merrall performs duty in the service of this Government. To me it seems clear that under this instrument no deduction can be made fr m that Civil Officer's pay on the occasion adverted to by the Civil Paymaster, as he obtained formal leave on the part of Government to absent himself from duty. I find moreover that during the time specified Mr. Merrall did not quit the limits of the District in which he was located.

From JOHN MILLER, Esq., Acting Government Solicitor, Madras, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Madras, 16th April 1862, No. 193.

SIR,

1. I have the honor to acknowledge your letters of the 10th and 14th instant, Nos. 244 and 228, and the Agreement which accompanied the latter.

2. I have perused and considered the Agreement with reference to the question as to whether Mr. Merrall is entitled to full salary during his absence on leave on Medical Certificate and I am of opinion that under the Covenant he is entitled to full salary during such absence, unless the Rules and Regulations of the Department to which he belongs and to which Rules and Regulations he is bound to conform disentitle him under the circumstances to any portions of his proper salary.

3. I return the Agreement above noted.

From Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to JOHN MILLER, Esq., Acting Government Solicitor, dated Chepauk, 19th April 1862, No. 233/N 107.

SIR,

1. The Rules and Regulations of the Department Public Works prescribe that all Officers and Subordinates absent from duty, whether on account of sickness or on private leave, shall suffer a deduction or stoppage of a moiety of their salaries during the term of such absence.

2. It would simplify the matter therefore if you would, with reference to your letter No. 193, be so good as to state whether Mr. Merrall having been so absent during 14 days on Medical Certificate, and with the full knowledge and consent of Government, is, or is not subject to a loss of half his salary for the period specified?

3. It would be presumptuous to offer my unprofessional judgment to you; but I must at the same time remark that were I called upon in equity to pronounce as to the spirit of Mr. Merrall's Covenant, and in interpretation of the meaning of the contracting parties to that instrument, I should unhesitatingly give a verdict in favor of Mr. Merrall, in the matter at issue. I should venture to argue that the circumstance of the stipulation of a deodand of 20 per diem being leviable against Mr. Merrall as a penalty for absenting himself without leave, should be held as proof of contemplated immunity in case of absence duly authorized and assented to, and I should further argue that the clause marked in pencil A in the body of the Deed (herewith returned for further reference) refers to, or was at all events intended to refer to, the "Rules and Regulations" by which the members of "the Department" are governed in the order, form and detail of their particular duties; and not to the Rules affecting salaries and allowances: otherwise the clause B would have been considered superfluous and contradictory.

B in Deed.

A in Deed.

From JOHN MILLER, Esq., Acting Government Solicitor, Madras, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Madras, 23rd April 1862, No. 199.

SIR,

1. I have the honor to acknowledge your letter of the 19th instant, No. 233, and its accompaniment.

2. I have re-considered the question of Mr. Merrall's salary and am of opinion that under his agreement and the Rules and Regulations therein referred to both of which must, and in my opinion can be read together, he is liable to forfeiture of a moiety of his salary during absence on Medical Certificate.

3. I return the enclosure received with your letter under reply.

The accompanying correspondence* with the Acting Government Solicitor on the subject of Mr. Merrall's claim to be exempted from forfeiture of salary during absence from duty on Medical Certificate, is submitted for the information of Government who will observe that Mr. Miller considers the plea put forth by that gentleman as unsustained.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

* 1 Letter from Government Solicitor, No. 169, dated 31st March 1862.
1 Do. to do., No. 213, dated 3rd April 1862.
1 Do. to do., No. 224, dated 10th do.
1 Do. from do. No. 193, dated 16th do.
1 Do. from do., No. 199, dated 23rd do.
1 Covenant.

No. 329. ORDER THEREON, 15th May 1862, No. 1,054.

The Officiating Civil Paymaster is informed that under the opinion expressed by the Government Solicitor Mr. Merrall, 1st Assistant District Engineer Nellore, is liable to forfeiture of a moiety of his salary during absence on Medical Certificate. The necessary retrenchment will accordingly be made for the period† during which Mr. Merrall was recently absent.

† From 29th January to 12th February 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 330. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 9th May 1862, No. 347:—

SIR,

In reply to Proceedings of Government No. 872, dated 30th April 1862, I have the honor to state that in accordance with Rule III, Circular Order Book, page 369, Mr. Thorp was appointed as temporary Assistant Overseer to superintend the construction of the road from Cuddapah to Ontimetta to continue so, as long as the sum allowed in that estimate for superintendence will meet his salary. Mr. Thorp's substantive appointment is Storekeeper in the Cuddapah District, and should Government be pleased to sanction the arrangement proposed by the District Engineer Cuddapah, as reported in my letter No. 12,810, dated 17th April 1862, Mr. Donelland will draw Rupees 50* per mensem as Acting Storekeeper in the room of Mr. Thorp.

* Full salary of Storekeeper.

No. 331. ORDER THEREON, 16th May 1862, No. 1,055.

† Construction of the road from Cuddapah to Ontimetta.

1. In the foregoing letter the Acting Deputy Chief Engineer, Central Circle, states that Mr. Thorpe is to be continued to be employed as a temporary Assistant Overseer so long as the sum allowed under the head of Superintendence in the Estimate marginally† noted will meet his salary.

2. The Government consider this mode of employing extra superintendence irregular. The rules require that any expense over and above the permanent Establishment attending the supervision of a work should be fully met from the sum provided in the Estimate for that purpose; whereas in the present case the intention appears to be to employ the temporary Assistant Overseer only so long as the provision made in the Estimate will allow of the arrangement, whether the work is completed or otherwise. The Acting Deputy Chief Engineer, Central Circle, is requested to state how much has been provided in the Estimate referred to above on account of superintendence, for how long a period the sum provided will admit of the employment of the Assistant Overseer, whether at the expiration of this period the work is expected to be completed, and if not, how the charge of superintendence will then be met.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 332. Read the following Proceedings of the Madras Government in the Financial Department, dated 12th May 1862, No. 352 :—

Deciding that the Military service of public servants who have quitted the Army and obtained employment in the Civil Department before July 1860, should be counted for Pension. } (Vide Financial Proceedings, 12th May 1862, Nos. 38 @ 40.)

No. 333. ORDER THEREON, 16th May 1862, No. 1,056.

Communicated to the Chief Engineer for information, with reference to his letter No. 10,961, dated 27th February 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 334. Read the following letter from Lieutenant-Colonel S. O. E. LUDLOW, Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 15th May 1862, No. 305K 97 :—

SIR,

1 Letter from District Engineer Kurnool, No. 12, dated 2nd instant.
1 Section.
1 Sketch.

1. I have the honor in accordance with the Order of Government No. 751, dated 4th April 1862, to forward a letter dated 2nd instant, No. 12, with its accompaniments from the Acting District Engineer Kurnool, relative to the cost of levelling the rampart and filling up the ditch of the Fort of Kurnool.

2. It appears from this communication that the cost of this work will greatly exceed the value of the building sites rendered available by the demolition, the expectation therefrom that the outlay would be more than recovered will not be realized.

Proceedings of Board of Revenue, No. 1,111, dated 17th Feb. 1862.

3. Unless, therefore, individuals can be induced, as suggested by Mr. Thornhill in paragraph 7 of his No. 36, to undertake the levelling, in return for the fee simple of ground, the work can only be executed at a heavy cost to Government, and whether it is worth while or not to incur such outlay must depend upon the amount of sanitary advantage which the work will secure, on which point it would seem most proper to consult the Medical Officers.

No. 335. ORDER THEREON, 16th May 1862, No. 1,057.

Communicated to the Revenue Department with reference to the Orders in that Department, No. 754, dated 4th April 1862, in view to its being determined whether, considering that the cost of levelling the rampart and filling up the Fort ditch at Kurnool will far exceed the value of the building sites rendered available by the demolition, it would be desirable to incur the expenditure on sanitary grounds.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 336. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 28th April 1862, No. 13,016:—

SIR,

2 Bills and 1 Comparative Statement.
1 Letter from District Engineer, dated 30th August 1861, No 850.

1. I have the honor to forward herewith two bills for alterations and additions to the Medical College Buildings, amounting to Rupees 6,055-5-1.

2nd Part Bill, Rupees	5,353	13	10	of 1860-61.
3rd Do. ,,	701	7	3	,, 1861-62.
	6,055	5	1	
1st Part Bill passed by this office.. ,,	4,964	6	8	of 1859-60.
Total Rs..	11,019	11	9	

* Estimate Rupees	9,800	6	8
Expenditure ,,	11,019	11	9
Excess ,,	1,219	5	1

2. From the accompanying letter from the District Engineer Presidency, dated 30th August 1861, No. 850, it will be seen that the excess* above the estimate is due partly to the enhanced prices of materials and labor, and partly to the execution of works not provided for in the estimate, but which, the District Engineer observes, were found absolutely necessary during progress. A Comparative Statement accompanies exhibiting a comparison of work performed with the estimate.

Final orders passed, dated 15th April 1862, No. 781.

† Dated 5th October 1861, No 5,630.

3. The Bills now submitted should have accompanied letter No. 6,157, dated 19th October 1861; but there were doubts entertained at the time as to the amount actually drawn by the District Engineer from Educational Funds, necessitating a reference† to that Officer which has not been replied to. I observe however from the letter from the Director of Public Instruction printed with the Proceedings of Government, dated 16th August 1861, No. 1,564, which the District Engineer did not quote when submitting his bills, that the amount spent in excess of that authorized is Rupees 1,219-5-1. This information has removed the doubts adverted to above, and I beg to recommend that under the circumstances, Government will be pleased to accord their sanction to the bills now submitted, and to authorize the reimbursement to the District Engineer from the Educational Funds, of the excess of Rupees 1,219-5-1.

No. 337. ORDER THEREON, 16th May 1862, No. 1,058.

1. The bills susbmitted with this letter are sanctioned with reference to the remarks contained in Proceeding of Government, No. 781, dated 15th April 1862.

2. Orders will be passed in the Educational Department with regard to the latter clause to paragraph 3 of Colonel Rundall's letter.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 338. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 7th May 1862, No. 247.

Read the following letter from Captain R. F. OAKES, District Engineer of Tanjore, to the Deputy Chief Engineer, Southern Circle, dated Tanjore, 14th April 1862, No. 380 :—

SIR,

1. I have the honor to inform you that an estimate of Rupees 195 was sanctioned by the Collector in April 1860, for extending and improving the Palligraram Channel; when the work was about to be carried out certain Mirasidárs objected to the work, and forcibly resisted its execution; this was brought to the Collector's notice in June 1860, and Mr. Cadell after making certain enquiries into the matter requested that the estimate might be cancelled on the 8th September. I pointed out on the 28th September that the Collector had been misinformed, and a copy of my letter was forwarded to you on the 29th June 1861, I was not favored with a reply to my letter No. 168, by Mr. Cadell.

No. 2,344 of 1859-60.
No. 47, dated 12th June.
No. 291.
No. 186.
With letter No. 66.

2. The Contractor who undertook the work and who received an advance of Rupees 80 on that account had collected materials to the value of Rupees 53-8-0 when the work was put a stop to, no works was in progress to which the materials could be transferred, and before the next working season some of the materials collected had been destroyed* by natural causes and others had been stolen,† or destroyed by the Mirasidárs who were opposed to the work, and only materials to the value of Rupees 17-6-0 could be made available for a work in the neighbourhood.

*	Rupees	11	10	6
†	,,	24	7	6
		36	2	0

Vide enclosure No. 2.

3. The Contractor would have carried out the work according to the provision of the estimate had not the work been stopped, and though he might be regarded as responsible for the safe custody of the materials had the work been postponed for a short period, he could not be expected to keep a Kávalgár to look after them for a year. I am therefore of opinion that the Contractor cannot be charged with the sum of Rupees 36-2-0,† the value of the materials stolen or destroyed by natural causes, and I have the honor to solicit the sanction of Government to their being written off to "Profit and Loss."

† RS.	A.
53	8
17	6
36	2

1 Letter with two Statements.

1. Submitted to Government with a recommendation that the sum of Rupees 36-2-0, being the loss on account of an advance of Rupees 80 made to a Contractor for the improvement of the Palliagraram Channel may be written off to loss.

2. In the case above reported, the Collector seems to have overlooked the necessity of replying to the District Engineer's letter of the 28th September 1860, No. 186.

3. As the District Engineer makes no allusion to the difference between the amount advanced (Rupees 80) and the value of materials collected by the Contractor (Rupees 53-8-0), he has been called upon to state, whether the same, Rupees 26-8-0, has been recovered.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 339. ORDER THEREON, 16th May 1862, No. 1,059.

1. Under the circumstances mentioned, the Government have no alternative but to authorize the sum of Rupees 36-2-0 referred to in the Endorsement of the Deputy Chief Engineer,

Southern Circle, being written off to "Profit and Loss." In doing so however they would remark that this loss or at least a portion of it would probably not have occurred had the Collector* of Tanjore promptly replied to the letter from the District Engineer, No. 186, dated 28th September 1860.

* Mr. Cadell.

2. The Government will await the Deputy Chief Engineer's further report regarding the sum of Rupees 26-8-0 referred to in paragraph 3.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 340. Read the following letter from J. E. MAYER, Esq., Professor of Chemistry, to A. J. ARBUTHNOT, Esq., Acting Chief Secretary to Government, dated Madras, 2nd May 1862, No. 3:—

SIR,

I have the honor to request that you will have the goodness to obtain the sanction of Government to the purchasing of the articles shown in the accompanying list now offered for sale by Mr. Faulkner, who states he is about to leave Madras. I would also beg to be informed of the mode in which it may please Government to order the cost to be defrayed should the purchase be decided on.

List of Articles offered for sale.

	RS.	A.	P.
10 Cwt. 3 qr. 9 lbs. of ⅝ in. and ⅜ in. Lead or Composition pipe at Rs. 34...	370	0	0
33 Pendants, eight feet long, similar to in the west upper story at Rs. 10...	330	0	0
33 Bronzed elbows and Burners at Rs. 1-8...	49	8	0
6 one inch Brass Cocks at Rs. 10...	60	0	0
6 Keys at Rs. 1...	6	0	0
36 seven inch post ground Glass Shades at Rs. 2...	72	0	0
Total...	887	8	0

Transferred to the Public Works Department for disposal with reference to the Proceedings of Government in the Public Department, dated 18th March 1862, No. 348.

Fort Saint George,
7th May 1862.

(Signed) W. S. WHITESIDE,
Deputy Secretary to Government.

No. 341. ORDER THEREON, 16th May 1862, No. 1,060.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for early report as to whether the articles enumerated in the list submitted by Dr. Mayer can be used in connection with the Gas Works, and whether they are worth the sum at which they are offered for sale.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 342. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 24th February 1862, No. 10,889.

Read the following letter from Captain J. G. RYVES, District Engineer Madura, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Madura, 12th February 1862, No. 1,552 :—

SIR,

1. As required by your orders No. 8,904, 24th December 1861, I have the honor to report that the depths obtained up to the end of 1859 (when the dredge was sent to Jaffna) were as follows :—

	Average of mean depths below low water neaptides.	Minimum, greatest or mid-channel, depth regulating the draught of vessels which can pass through.
Reef Channel....................	12′ 7″	11′ 10″
Sand bank channel............	11′ 8″	10′ 6″

Vessels drawing 11 feet could and did then pass through the two channels at high water ; and those drawing 10 feet at half tide.

2. From soundings taken by Captain Hankin on the 20th December last, it appears that during the last two years the silting up of the Sand bank Channel has not been kept under, but has gained on us very seriously. We appear to have lost* 1 foot 2 inches on the mean depth, and 9 inches on the minimum mid-channel depth. There is no tendency to silt up in the Reef channel ; but silt and sand is deposited a few hundred yards outside the northern entrance.

* Nett loss since 1858 when Lieutenant Campbell's 15,760 Rupees' estimate was submitted, is ·04 feet on the mean depth of the Sand bank Channel.

3. The charts of 1859 were forwarded by me on the 24th November 1859 to the Central Office and to the Superintendent of Marine, and I now forward a copy of the Chart of soundings taken on the 20th December last.

4. I take this opportunity to report that the shoal at the eastern entrance of the Sand bank Channel has not yet been touched, this shoal is 1,200 feet across with only from 10 to 11 feet of water ; there is also a similar shoal 150 feet across at the other end of the channel.

5. I think we ought to dredge out a mid-channel at least 12 feet deep throughout the whole length of 3,450 feet before we do any thing more towards widening the old channel, and for this purpose I would propose an annual allowance for so many working months for the steam dredge and hand dredge.

———

1. Submitted for the information of Government, with reference to a copy of reports and information respecting the deepening of the Paumben Passage, &c., dated 12th August 1859, received in this Office on the 19th December 1861, from the Public Department.

[1] Original letter No. 1,552, with 1 copy of chart 2-16,430-12, dated 12th February 1862.

2. As the District Engineer has not named the amount which would be required as an annual allowance, for working both the steam and hand dredges, for opening out a mid-channel 12 feet deep, alluded to in paragraph 5 of the above letter, he will be called upon to supply the omission, which will be submitted to Government immediately on receipt.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 343. ORDER THEREON, 16th May 1862, No. 1,061.

1. With the above Endorsement the Deputy Chief Engineer, Southern Circle, submits a letter from the District Engineer Madura, No. 1,552, dated 12th February 1862, accompanied by a Chart of the Paumben Channel, showing the result of soundings taken on the 20th December 1861. The District Engineer reports that the average of mean depths below low water neaptides at the end of 1859, when the Dredge was sent to Jaffna, were as follows:—

	feet.	inches.
Reef Channel	12	7
Sand Bank do.	11	8

and the minimum greatest or mid-channel depth, regulating the draught of vessels which can pass through the channel as follows:—

	feet.	inches.
Reef Channel	11	10
Sand Bank do.	10	6

He further states that vessels drawing 11 feet could and did then pass through both channels at high water, and those drawing 10 feet at half tide. Since the above date, for want of the Steam Dredge, the silting up of the Sand bank Channel has increased very seriously, the loss being 1 foot 2 inches on the mean depth and 9 inches on minimum mid-channel depth. The Reef Channel it appears has no tendency to silt up, but sand is deposited a few hundred yards from the northern entrance of it. Shoals are reported to exist at both entrances to the Sand bank Channel, the depth of water over them being from 10 to 11 feet.

2. Captain Ryves recommends that a mid-channel should be dredged to the depth of 12 feet throughout its entire length 3,450 feet before any thing further is done towards widening the old Channel, and he proposes that an annual allowance should be granted for this purpose, but to what amount is not stated. The Government approve of this course, but before passing final orders they will await the information which it is observed has been called for by the Deputy Chief Engineer, Southern Circle. They also wish to know how much of the Supplemental Estimate of Rupees 5,680, sanctioned in Proceedings No. 451, dated 6th March 1861, has been spent. A copy of the Chart referred to above will be forwarded to the Superintendant of Marine through the Marine Department for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 344. Read the following Proceedings of the Madras Government in the Military Department, dated 9th May 1862, No. 1,719:—

Approving of the estimate for converting the South room on the upper story of the Medical Stores in the Fort into a Storing room. (Vide Military Proceedings, 9th May 1862, Nos. 230-231.)

No. 345. ORDER THEREON, 16th May 1862, No. 1,062.

1. Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

2. The work will be proceeded with from the General Funds at the disposal of the District Engineer Presidency for 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 346. Read the following Proceedings of the Madras Government in the Military Department, dated 10th May 1862, No. 1,722:—

Concurring in the remarks of the Controller of Military Finance that the Public Works Department should be applied to in such cases as making a bund across a portion of the Toongabuddra. } (Vide Military Proceedings, 10th May 1862, Nos. 232-233.)

No. 347. ORDER THEREON, 16th May 1862, No. 1,063.

Communicated to the Deputy Chief Engineer, Northern Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 348. Read the following Proceedings of the Madras Government in the Military Department, dated 10th May 1862, No. 1,723:—

Referring letter from the Inspector General of Ordnance and Magazines with a view to ascertain whether a competent person is available for putting up and organizing the working of the Engines for the twelve steam Incorporating Mills. } (Vide Military Proceedings, 10th May 1862, Nos. 239-240.)

No. 349. ORDER THEREON, 16th May 1862, No. 1,064.

Communicated to the Chief Engineer for early report with reference to paragraph 2.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 350. Read the following Proceedings of the Madras Government in the Military Department, dated 9th May 1862, No. 1,706 :—

Requiring that the course suggested by the Government of India with regard to applications to local Authorities in the Straits Settlements on matters such as the deterioration of Gun Powder may be observed in future. } (Vide Military Proceedings, 9th May 1862, Nos. 207-208.)

No. 351. ORDER THEREON, 16th May 1862, No. 1,065.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 352. Read the following Proceedings of the Madras Government in the Military Department, dated 6th May 1862, No. 1,648 :—

Communicating papers with reference to the Military Lines of communication in the Madras Presidency. } (Vide Military Proceedings, 6th May 1862, Nos. 115 @ 118.)

No. 353. ORDER THEREON, 16th May 1862, No. 1,066.

Communicated to the Chief Engineer and to the Deputy Chief Engineers Northern, Southern, and Central Circles, for information. The attention of the local Officers should be particularly directed to the Military lines of communication in this Presidency, with a view to their being maintained in an efficient state of repair.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 354. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Principal of the Civil Engineering College, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 13th May 1862, No. 44:—

SIR,

Adverting to the existing vacancies in the subordinate ranks of the Department Public Works, I have the honor to inform you that I expect the whole of the First Class of the Civil Engineering College will obtain Certificates of qualification as Assistant Overseers and first Class Sub-Overseers at the end of this month. The greater number of them are Military Students, and as there is usually a considerable delay in getting the services of each man placed at the disposal of the Chief Engineer's Department Public Works, which is injurious to the man, and an inconvenience to the District Engineer whom he is appointed to serve under, I have the honor to suggest the expediency of allowing the Military Students of the College to proceed to join their Districts as soon as ever their appointments are approved of by the District Engineers, leaving the formal transfer of their services to the Department Public Works to be made in Military orders supsequently.

No. 355. ORDER THEREON, 16th May 1862, No. 1,067.

This letter will be referred to the Military Department for consideration.

(Signed) W H HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 356. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 24th April 1862, No. 12,905:—

SIR,

1 Letter from the District Engineer, North Arcot, No. 1,594, dated 21st March 1862.
1 Plan.
1 Estimate.

1. With reference to the Proceedings of Government No. 75, dated 30th January 1862, I have the honor to forward a plan and estimate amounting to Rupees 460 for constructing an additional Guard Room at the entrance of the Upper Barracks at Raneepet, in the District of North Arcot.

2. The addition proposed to be made to the Guard Room is exactly similar to one of the rooms already in existence at the Barracks, and is approved of by the Officer Commanding the Division. The plan and estimate have been examined in this Office and corrected where necessary, and I beg to recommend that the work may be ordered for execution from the Reserve Fund of the next official year.

Referred to the Military Department for consideration.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
28th April 1862. *Secretary to Government, P. W. D.*

MEMORANDUM.
No. 1,361.

Returned to the Department Public Works, with reference to Proceedings of Government, Military Department, 1st May 1862, No. 1,853.

(Signed) R. HAMILTON, Lieut.-Colonel,
Deputy Secretary to Government.

FORT SAINT GEORGE,
3rd May 1862.

No. 357. ORDER THEREON, 16th May 1862, No. 1,068.

The papers received with the Memorandum from the Military Department will be returned to the Acting Deputy Chief Engineer, Central Circle, with reference to the orders in that Department, No. 1,583, dated 1st May 1862, communicated in Proceedings No. 990, dated 8th May 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 358. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 27th February 1862, No. 146:—

SIR,

1. In obedience to paragraph 9 of the Proceedings of Government, No. 1,347, dated 20th July 1861, I have the honor to forward herewith the required Tabular Statement of the proposed increase to the Establishment of the Dowlaishwaram and Bezwada Workshops, together with the correspondence noted in the margin.

1 Letter to District Engineer Godavery, 13th November 1861, No. 7,151.
1 Do. from do. 26th December 1861, No. 1,065.
1 Do. to do. 16th January 1862, No. 9 351.
1 Do. to District Engineer Kistna, 16th January 1862, No. 9,352.
1 Do. from do. Godavery, 27th January 1862, No. 1,183.
1 Do. from do. Kistna, 31st January 1862, No. 194.
1 Tabular Statement.

To District Engineer Godavery, 13th November 1861, No. 7,151.
From do. do. 20th December „ „ 1,065.
To do. do. 16th January 1862, „ 9,351.
To District Engineer Kistna, 16th do. „ „ 9,352.
From do. Godavery, 27th do. „ „ 1,183.
From do. Kistna, 31st do. „ „ 194.

2. The following summary will show the financial result of the contemplated changes:—

	Present scale.			Proposed scale.			Increase.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Dowlaishwaram Factory..............................	1,802	3	7	3,262	0	0	1,459	12	5
Bezwada branch do..................................	212	0	0	709	0	0	497	0	0
Mechanical Engineers, see paragraph 4 below..	0	0	0	0	0	0	157	8	4
Department of instruction for Apprentices.......	0	0	0	327	0	0	327	0	0
Total..........	2,014	3	7	4,298	0	0	2,441	4	9

* 27th January 1862, No. 1,182.

3. The District Engineer explains* that the four Apprentices in the Godavery District do not form part of the regular Establishment of the Workshop; and have not therefore been absorbed in it under the revised scale. The District Engineers, Godavery and Kistna,† repeat that the services of the Storekeepers attached to their Offices cannot be transferred to the Workshop, as, like all other District Engineers, they will have to keep their accounts of their charge, of District Stores, scientific instruments, &c., sent from the Central Office for distribution to the Ranges, quite distinct from that of the Workshops. Consequently a transfer of the Storekeepers would operate as a serious inconvenience.

† See letter to Government, dated 13th November 1861, No 7,152.

4. It will be seen from the Tabular Statement that two out of the three Mechanical Engineers employed in the Godavery and Kistna Districts, have been absorbed into the proposed Establishment; but the difference between the salaries which they will actually draw under their Covenants and those provided for them on the revised scale, will form an increased item of charge on the State. Mr. Mechanical Engineer Thompson being now employed in charge of the Sea Dredges at Cocanada, has been excluded from the Workshop Establishment, as his services will be requisite for the above duty so long as he remains in the District.

5. Referring to paragraph 4 of the Chief Engineer's letter to Government, No. 7,152, dated 13th November 1861, I beg to suggest that the contemplated changes in the Establishment should take effect from the 1st May next. The Budget of the official year which will commence on that date contains the necessary provision for the enhanced charge as well as for the advances to be drawn from the Collector for the working expenses of the Factory.

No. 359. ORDER THEREON, 16th May 1862, No. 1,069.

1. With the above letter the Deputy Chief Engineer forwards the Tabular Statement of the proposed Establishment for the Dowlaishwaram Workshop, called for in Proceedings of the 20th July 1861, No. 1,347.

2. This Statement, together with the report of the Committee appointed for the revision of the Workshop accounts and the Proceedings of this Government thereon, will be forwarded to the Government of India, with a request that the arrangements therein proposed, involving an actual monthly increase of Rupees 2,283-12-5, may be sanctioned and allowed to take effect from 1st of May next. It will be pointed out at the same time that it is the intention of Government that the Workshop should be self-supporting, so that the sum above mentioned will not be a charge to the State. Irrespective of the increase of Rupees 2,283-12-5 referred to above, a sum of Rupees 157-8-4, which is the difference between the salaries actually drawn by the Mechanical Engineers marginally noted under their Covenants, and that provided for them in the proposed scheme, will have to be borne by the State in the same manner as the entire salaries of these individuals are at present.

Mr. Gutcher
Mr. Drummond.

3. As the District Engineers, both of the Godavery and the Kistna, report that in the event of their Storekeepers being merged into the Workshop Establishments, it will be necessary to make some similar arrangement for the custody of the District Stores, these appointments are allowed to remain undisturbed.

4. The Government observe from paragraph 3 of Colonel Ouchterlony's letter that as the Apprentices in the Godavery District form no part of the regular Establishment of the Workshop, they have not been absorbed in it under the revised scale.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 360. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government Public Works Department, Fort Saint George, to the Secretary to the Government of India, dated 16th May 1862, No. 1,090.

SIR,

1. I am directed by His Excellency the Governor in Council to submit for the approval and sanction of the Government of India, the accompanying Tabular Statement in the prescribed form, proposing an improved Establishment for the Dowlaishwaram Workshop in the Godavery District, and its subordinate branch at Bezwada in the Kistna District, involving on the whole an aggregate expenditure of 4,673 Rupees per mensem, or an increase over the existing establishment of 2,283-12-5 Rupees per mensem.

	RS.	A.	P.
Proposed scale of establishment	4,673	0	0
Present do	2,346	11	11
Net increase, Rupees	2,283	12	5

2. It is unnecessary to trouble the Government of India with the past correspondence on this subject, or with any details of the discussion which has resulted in the present proposal. The improvement of these establishments (the working value of which could never be ascertained), and the affiliation of the one to the other, have long been under consideration, and it was finally committed by the Government to the hands of a Committee consisting of the Officers noted in the margin, who were requested to take the whole matter into their deliberate inquiry, and devise a scheme of accounts for the Workshops, establish rules for valuing work done and articles produced, and report on the Office establishments necessary to ensure the books and accounts being punctually and correctly kept, and the returns promptly rendered. The report of the Committee on all these points, assisted as they were with information furnished by the Superintendent of the Workshop at Roorkee and other Officers competent to aid them in the inquiry, together with the Proceedings of Government thereon, is herewith forwarded for the information of the Government of India. This report enters so minutely into the entire question, and the Proceedings recorded thereon so fully

Colonel Boileau, Deputy Chief Engineer, S. Jevaram Setti, Head Sherishtadar Board of Revenue, Mr. W. Donald, Uncovenanted First Assistant to Chief Engineer.

Report dated 28th March 1861.

Proceedings of Government, 20th July 1861, No. 1,347.

set forth the views of Government, that it is only necessary to request attention to these papers for a thorough apprehension of the advantages and practical value of the proposed reform.

3. The chief feature of the reform is, as already indicated, the affiliation and subordination of the Bezwada Workshop to that at Dowlaishwaram, so as to bring both establishments under the directions of one responsible Superintendent, who, stationed at Dowlaishwaram, will occasionally visit the Workshop at Bezwada; to enable him to do which, it is proposed to give him a superior Assistant who will have charge of the duties at Dowlaishwaram during his own absence at the subordinate Workshop. The latter institution will be placed under the immediate superintendence of a Deputy Superintendent. There will be a European Foreman for each branch of the two Workshops, with an Overseer immediately above the Foreman at the superior establishment. There will be a separate Storekeeper for the responsible charge of timber, iron castings, petty stores, machinery, and tools not issued, of which he will have to keep a regular account; and there will be a Head Accountant, assisted by a suitable staff of Accountants, to carry out the perfect scheme of accounts devised by the Committee. It is unnecessary to notice the subsidiary appointments in completion of the general plan.

4. I am directed to convey the strong recommendation of this Government that the arrangement proposed by the Committee, involving, as already noticed, an actual monthly increase of Rupees 3,283-12-5 may be sanctioned, and allowed to take effect from the 1st May next; and I am at the same time to point out that it is the intention of Government that the Workshops should be self-supporting, so that this extra sum will not be a charge to the State.

PUBLIC WORKS DEPARTMENT.—Statement of Increase to Establishment

Number.	Date.	Extract from Home Dept. of Govt. of India.	Office to which the proposition refers.	Nature of charge.	Year.	Charges. Ordinary.	Extraordinary.	Total.
			Dowlaishwaram and Bezwada Workshops.	Present Scale. / Proposed Scale.				

Present Scale.

	RS.	A.	P.	RS.	A.	P.
1 Superintendent	600	0	0			
1 Asst. Supervisor ...	150	0	0			
1 Do. ...	144	3	7			
1 Overseer... ...	100	0	0			
1 Asst. Overseer ...	80	0	0			
1 Sub do. ...	40	0	0			
1 Do. do. ...	40	0	0			
1 Do. do. ...	30	0	0			
1 Do. do. ...	25	0	0			
				1,209	3	7
Office Establishment.						
1 Accountant... ...	35	0	0			
1 Writer	30	0	0			
1 Gumáshta... ..	14	0	0			
1 Lascar... ...	7	0	0			
3 Do. at Rs. 6 each....	18	0	0			
1 Asst. Supvr's estab.	27	0	0			
1 Do. ...	27	0	0			
1 Overseer's do....	27	0	0			
1 Asst. do. do....	27	0	0			
				212	0	0
Temporary Establishment.						
Asst. Superintendent.	250	0	0			
				250	0	0
Office Establishment maintained from Machinery and tool funds.						
1 Accountant ...	50	0	0			
1 Storekeeper ...	55	0	0			
1 Gumáshta ...	10	0	0			
1 Do. ...	9	0	0			
1 Múchí ...	7	0	0			
				131	0	0
Total...	1,802	3	7			

Proposed Scale.

DOWLAISHWARAM FACTORY.

	RS.	A.	P.	RS.	A.	P.
General Branch.						
1 Superintendent ...	800	0	0			
1 Asst. Supt. ...	250	0	0			
1 Overseer with free quarters... ...	200	0	0			
1 Foreman of Carpenters with do.	150	0	0			
1 Do. of Smiths with do	150	0	0			
1 Do. of Founders with do.	150	0	0			
1 Do. of Fitters and Vicemen with do.	150	0	0			
4 Sub-Foremen at 50 Rs. each.	200	0	0			
1 Accountant for the Overseer.	25	0	0			
4 Do. for Foremen at Rs. 20 each ...	80	0	0			
6 Lascars, 2 for Overseer and 4 for Foremen at Rs. 6 each.	36	0	0			
				2,191	0	0
Store Department.						
1 Storekeeper with free quarters ...	175	0	0			
1 Deputy Storekeeper with do.	70	0	0			
4 Accountants at Rs. 35, 25, 20, and 15.	95	0	0			
8 Lascars at Rs. 6 each.	48	0	0			
				388	0	0
Superintendent's office Establishment and Account Department.						
1 Head Accountant ...	200	0	0			
1 Deputy Do. ...	100	0	0			
1 Accountant. ...	40	0	0			
1 Do. ...	25	0	0			
1 Do. ...	15	0	0			
1 Draftsman and Estimate maker ...	70	0	0			
1 Shroff... ...	15	0	0			
1 Múchí.. ...	15	0	0			
1 Do. ...	10	0	0			
3 Peons at 6 Rs. each.	81	0	0	508	0	0
House rent for 1 Overseer, 4 Foremen and 2 Storekeepers at 25 Rs. each. ...				175	0	0
Total...				3,262	0	0

in this Department recommended for the sanction of the Government of India.

Proposition.																	Orders of the Government of India.		
Permanent.						Temporary.								Casual or Extraordinary.	Grounds of proposition.	Local Government's recommendation.	Home Department.	Financial Department.	
Increase per month.			Decrease per month.			Period.	Increase per month.			Period.	Decrease per month.						Remarks.	Remarks.	Orders.
RS.	A.	P.	RS.	A.	P.		RS.	A.	P.		RS.	A.	P.						
															Vide letter to the Secretary to the Government of India, dated 16th May 1862, No. 1,070.	Favorable,			
1,459	12	5																	

PUBLIC WORKS DEPARTMENT.—Statement of Increase to Establishment

Extract from Home Dept. of Govt. of India. Number.	Date.	Office to which the proposition refers.	Nature of Charge. Present Scale.	Rs.	A.	P.	Rs.	A.	P.	Proposed Scale.	Year. Charges. Ordinary. RS.	A.	P.	Extraordinary. Total. RS.	A.	P.
		Dowlaishwaram and Bezwadah Workshops.	BEZWADAH BRANCH FACTORY.													
			1 Sub Overseer... ...	40	0	0				1 Superintendent ...	200	0	0			
			1 Do. ...	30	0	0				1 Foreman of Smiths.	60	0	0			
			1 Do. ...	25	0	0				1 Do. of Carpenters.	60	0	0			
			1 Do. ...	25	0	0				1 Do. of Fitters ...	60	0	0			
			1 Writer... ...	21	0	0				3 Accountants of Foremen at 15 Rs. each.	45	0	0			
			1 Lascar... ...	6	0	0				3 Lascars at 6 Rs. each.	18	0	0			
			3 Do. at 5 Rs. each.	15	0	0	162	0	0					443	0	0
			Temporary Establishment.							*Store Department.*						
			1 Maistry... ...	18	0	0				1 Storekeeper ...	85	0	0			
			1 Gumáshta ...	12	0	0				1 Accountant ...	20	0	0			
			1 Do. ...	10	0	0				1 Do. ...	15	0	0			
			2 Peons at 5 Rs. each.	10	0	0				3 Lascars at 6 Rs. each.	18	0	0	138	0	0
							50	0	0	*Account Department.*						
										1 Accountant ...	50	0	0			
										1 Do. ...	25	0	0			
										1 Do. ..	15	0	0			
										1 Shroff... ...	10	0	0			
										1 Múchí... ...	10	0	0			
										3 Peons at 6 Rs. each.	18	0	0	128	0	0
			Total...	212	0	0				Total...				709	0	0
			Amount which will probably be undrawn and that which will be added by the retention of two Mechanical Engineers as below.													
			Dowlaishwaram.—Mr. T. Gutcher...				266	4	2	* Mr. T. Gutcher, Foreman... ...	175	0	0			
			Bezwadah.—Mr. D. Drummond ...				266	4	2	* Mr. D. Drummond, Superintendent ...	200	0	0	375	0	0
			Total...				532	8	4							
										Dowlaishwaram Factory Department of Instructions for Apprentices.						
										Europeans and East Indians.						
										2 at 7 Rs. each ...	14	0	0			
										2 at 10 do. ...	20	0	0			
										2 at 14 do. ...	28	0	0			
										4 at 20 do. ...	80	0	0	142	0	0
										Natives.						
										5 at 5 Rs. each ...	25	0	0			
										5 at 7 do. ...	35	0	0			
										5 at 10 do. ...	50	0	0			
										5 at 15 do. ...	75	0	0	185	0	0
										Total of Apprentices.				327	0	0
			Grand Total...				2,546	11	11					4,673	0	0

* These two are Mechanical Engineers, and must be paid according to their Covenants, hence the increase.

in this Department recommended for the sanction of the Government of India.

Proposition. Permanent. Increase per month. Rs.	A.	P.	Permanent. Decrease per month. Rs.	A.	P.	Temporary. Period.	Temporary. Increase per month. Rs.	A.	P.	Temporary. Period.	Temporary. Decrease per month. Rs.	A.	P.	Casual or Extraordinary.	Grounds of proposition.	Local Government's recommendation.	Orders of the Government of India. Home Department. Remarks.	Orders of the Government of India. Financial Department. Remarks.	Orders of the Government of India. Financial Department. Orders.
497	0	0													Vide letter to the Secretary to the Government of India dated 16th May 1862, No. 1,070.	Favorable.			
157	8	4																	
327	0	0																	
2,283	12	5																	

No. 361. Read the following Proceedings of the Madras Government in the Revenue Department, dated 2nd May 1862, No. 963A :—

Recognising Captain Beddome's claims and permitting him to resume the Office of Acting Conservator of Forests. } (Vide Revenue Proceedings, 2nd May 1862, Nos. 65-66.)

No. 362. ORDER THEREON, 17th May 1862, No. 1,071.

Communicated to the Chief Engineer for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 363. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 2nd May 1862, No. 46 :—

SIR,

1. With reference to the Proceedings of Government No. 712, dated 8th April 1862, I have the honor to forward a letter received from the District Engineer Presidency, explaining that the cause of delay in carrying out the improvement to the Constable's Quarters and Thannah station in Oodacall Street was owing to the purchase of the site not being effected by the Commissioner of Police till the 25th of September 1861. The ground was then taken charge of, and the old building cleared away, when it was found requisite to prepare supplemental estimate as some of the walls on which new out-houses were proposed to be built, were of fragments of bricks in clay. One of the walls was also found to be out of the perpendicular, which necessitated a provision for its re-construction in the estimate.

1 Letter from the District Engineer Presidency, No. 2,992, dated 17th April 1862.
1 Do. No. 2,291, dated 8th February 1862.

2. The amount estimated to be recovered by the sale of old materials was not realized to the full extent, and on the 1st February 1862 the District Engineer submitted a fresh estimate. Certain references had to be made to him, and finally the application for additional sanction was made by this Office on the 1st April last.

No. 364. ORDER THEREON, 17th May 1862, No. 1,072.

1. Under the explanation now afforded the Government sanction the supplemental estimate amounting to Rupees 474, submitted by the Acting Deputy Chief Engineer, Central Circle, with his letter No. 12,147, dated 1st April 1862, for the work noted in the margin.

Tannah Station in Wodacal Street.

2. The work will, as suggested by Lieutenant-Colonel Carpendale, be executed from the General Funds at the disposal of the District Engineer Presidency.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 365. Read the following letter from Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 2nd May 1862, No. 54 :—

SIR,

1. In acknowledging the receipt of the Proceedings of Government No. 788, dated 16th April 1862, sanctioning an estimate amounting to Rupees 1,240, for repairing the building occupied by the male branch of the Lawrence Asylum at Ootacamund, I have the honor to state, for the information of Government, that on examination in this Office, the amount of the estimate in question has been corrected to Rupees 1,310, or Rupees 70 in excess of the original sum, owing to certain discrepancies in the District Engineer's rates.

2. As there are not any other funds in the Budget for 1862-63 available for this work, I beg to recommend that the amount, viz., Rupees 1,310, may be sanctioned from the Reserve Fund of the current official year.

3. Captain Goddard has been requested to proceed with the repairs at once, advancing the necessary money from the General Funds of the District, to be re-paid when the estimate shall have been sanctioned from the above source, which I trust will meet with the approval of Government.

No. 366. ORDER THEREON, 17th May 1862, No. 1,073.

1. The Government authorize the Accountant General to place a sum of Rupees 1,310 at the disposal of the District Engineer, Coimbatore, from the Reserve Fund of the current year, for repairing the building mentioned in the foregoing letter.

2. The Deputy Chief Engineer's proceedings as reported in paragraph 3 are approved.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 367. Read the following Endorsement of the Officer in charge of the Audit and Account Departments, dated Chepauk, 2nd May 1862, No. 82.

From Mr. P. CURLEY, Deputy Commissary, Superintendent Presidency Stores, to Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, dated Chepauk, 16th April 1862.

SIR,

I have the honor to forward my Bill amounting to Rupees (412-6-6) four hundred and twelve, Annas six and Pice six, being the expense incurred in removing Government Stores from the North Beach to Chepauk, as authorized by Government in Proceedings No. 1,097, under date the 14th June 1861, and beg that you will be pleased to authorize the amount to be passed as early as convenient to enable me to repay the amount to the source from whence it had been advanced.

1 Bill.

No. 13,008.

Transferred to the Officer in charge of the Audit Department for disposal.

1 Original letter with one Bill.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

Central Office of Public Works,
Chepauk, 29th April 1862.

[1] Letter from the Superintendent of the Presidency Stores with the Endorsement of the Chief Engineer thereon, dated 28th April 1862, No. 13,008, with one Bill.

* In Proceedings of Government, dated 14th June 1861, No. 1,097.

Submitted to Government with a recommendation that the [1]Bill received with the foregoing letter for Rupees 412-6-6, being the expense incurred in removing Government Stores from the North Beach to Chepauk, where a building called the "Ferish Khanah" was authorized* to be converted into a Store Yard for the Public Works Department at a cost of Rupees 2,000, be sanctioned, and that the amount be defrayed from the sum of Rupees 25,000 entered in the Budget of 1862-63 for freight, &c., on Stores.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In charge of the Audit and Account Departments.

No. 368. ORDER THEREON, 17th May 1862, No. 1,074.

1. The bill is sanctioned.

2. The amount, viz., Rupees 412-6-6, will be defrayed from the source mentioned by the Officer in charge of the Audit and Account Departments of the Central Office.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 369. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 2nd May 1862, No. 289, K 109.

Read the following letter from Captain J. BEATTY, Acting District Engineer of Kurnool, to Lieutenant-Colonel J. OUCHTERLONY, Deputy Chief Engineer, Northern Circle, dated Kurnool, 23rd April 1862, No. 1,264:—

SIR,

1. I have the honor to report that the operations of this season on the Manterál Kanama Ghát have been brought to a close by the complete stoppage of the supply of labor, owing to the prevalence of fever among the workmen and a slight out-break of cholera, which drove away the remainder of the working party already greatly reduced by desertions and sickness. The result of the season's work has been the opening of the Pass, for the first time, to bandy traffic. This project, from which some advantage will now begin to be derived, has been in progress with many interruptions since 1857.

2. As you are doubtless aware, in the whole Range of the Nulla Mulla Hills, stretching from the Kistna to the borders of Cuddapah, a distance of nearly 80 miles, and cutting off in the Markapúr and Cumbum Táluqs fully a fourth of the District from the rest of it, there has hitherto existed only one Pass practicable for country carts. Along this chain of hills, which vary in height from 500 to 3,200 feet above the sea, the belt of feverish jungle, which has cost the Department some valuable lives, varies in width from 20 to 30 miles.

3. To give you an idea of the difficulties of the Manterál Kanama up to this time, I may mention that so late as January last, when I ascended to Róllapenta to direct this season's work, I found that the limbs of a sure-footed horse would have been endangered in an attempt to lead him up the last two miles below the summit, and bandies could only ascend to within four and a half miles of it on the western, and six miles on the eastern, face.

4. The operations of the season were commenced after the heavy rains which fell at the beginning of January, under the superintendence of Assistant Overseer T. Skipp, assisted by temporary Sub-Overseers Varadarajulu and Narsiah. The two former persevered with the work, notwithstanding attacks of fever, until deserted by the workmen at the beginning of this month, and deserve much credit for their exertions under special difficulties; Narsiah had an attack of fever in the beginning of February which obliged him to seek medical advice at Cumbum, where he was upwards of a month under treatment. Persons who have once suffered from the fever of this Ghát seldom get rid of it without a complete change of climate.

5. The work done consisted of bridging three ravines on the western side, on which the practicability of the upper four and a half miles of that face mainly depends; repairing the revetments and clearing and improving the road-way along five miles of that side; also of opening the new trace of two miles of the Dórinal face through which no bandy had ever before penetrated, where also the hill sides were covered with loose pieces of rock some of them of great size; of building the abutments and wings of two new tunnels on that face and restoring the timber flooring of a third which had been burnt down, and of repairing the revetments and clearing and improving the road-way for seven miles from the summit towards Dórinal.

6. During these operations the whole of the workmen were hutted on the summit, called Róllapenta, a small plateau, about 1,800 feet above the sea and 12 to 20 miles from the nearest villages on the outskirts of the jungle. Supplies were, in the first instance, conveyed to them from the western side, part of the way by bandies, and the rest by coolies, until the completion of the bridges when the bandies made their way to the summit. Last month the eastern face of the Ghát at length became practicable, and it was then found much easier to draw supplies from Dórinal than Venkatapuram.

7. The Pass may now be considered to have been opened up. At many points of the road, however, there is still only room for the passage of single country cart, and the road-way may at any time become impassable either by the timber flooring of a bridge taking fire, or a piece of revetment giving way. The former has to my knowledge been caused by burning logs of timber from the midst of the bamboo jungle above (which ignites by attrition) rolling down the ravine and striking against a bridge; and the revetments are often injured by a mass of rock, loosened from the hill sides in the rains, being precipitated on to the road-way and striking it in its weakest part.

8. I anticipate that next season the Ghát will be made permanently passable. All that is necessary to this end is that brick arches should be turned over five ravines at which wings and approaches have this year been completed, and that the road should be widened at its narrowest parts; sufficient bricks have been made and burnt at Potrazpenta and Tekulapenta.

9. It cannot however be expected that the beneficial effects of this important piece of communication will be appreciably felt until the approaches from the east and west have been greatly improved.

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1 Original letter, No. 1,264, dated 23rd April 1862.

1. Submitting for the information of Government a letter (No. 1,264, dated 23rd April 1862) from Captain Beatty, reporting cessation of work for the reason on the Munteral Canamah Ghát, and stating that the Pass is now, practically speaking, open for bandy traffic throughout.

2. The Acting Deputy Chief Engineer, Northern Circle, begs to express an opinion that the perseverance and energy displayed by the District Engineer and the Assistant and Sub-Overseers Skipp, Vardarajulu and Narsiah in prosecuting the work so far, under great difficulties, to a successful issue, reflect great credit on them.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 370. ORDER THEREON, 17th May 1862, No. 1,075.

The Government are gratified to observe from the report submitted by the Acting Deputy Chief Engineer, Northern Circle, that the Munteral Canamah Ghát in the Kurnool District is now open for bandy traffic throughout, and they notice with favor the exertions of Assistant Overseer Skipp and Sub-Overseers Vardarajulu and Narsiah. In view to this Ghát being turned to the best account the Government direct that Estimates be at once framed and submitted for improving the approaches to it from the east and west.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 371. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 24th April 1862, No. 112:—

SIR,

1. With reference to the Proceedings of Government of the 10th March last, No. 397, I have the honor to forward the accompanying three letters* from the Agent furnishing the information therein called for, relative to certain entries in the Company's Cash Accounts for the quarter ending 30th September 1861.

* Dated 31st March 1862, No. 105.
" 12th April " " 123.
" 16th " " " 129.

2. Out of the outstanding advances made up to 30th September 1861, and noticed in paragraph 2 of the Proceedings, Rupees 60,931-5-6 yet remain to be adjusted, which sum the Agent states was for the most part expended on the Kurnool Anicut, and will not be adjusted in his accounts till June 1862, owing to the necessity for further references made to the Engineers on the subject.

3. The carriage allowance drawn by Mr. Bennet for the period in which he was paid Rupees 60 as batta, the Agent states, amounts to Rupees 29-2-8, and that it has been refunded as ordered by Government. He adds that the sum of Rupees 60 advanced on account of Contingencies was held in suspense till it was duly accounted for by an expenditure therefrom to the amount of Rupees 37-5-0, and that this sum was adjusted in his accounts for January 1862.

4. With regard to the irregularity in the payment of salaries, &c., noticed in paragraphs 6 and 7 of the Proceedings, the Agent's letter, No. 123, contains explanation in each case, from which it will be observed that the delay in the payment of the extra allowance to Mr. Gordon arose from his having deferred making his claim, and Mr. Power's salary though paid in each month, was not charged in the Accounts till April 1860, or until sanction had been obtained for his appointment, the rest of the payment referred to were only on account of difference of salary consequent upon promotion of certain Officers to higher grades, made under the sanction conveyed in the Proceedings of Government, dated 3rd April 1861, No. 654.

5. With respect to the points noticed in paragraph 9, the Agent states, in his letter No. 105, of the 31st March, that public advertisements were made both in Madras and Bangalore, and that the Railway Company would not undertake to be responsible for the Stores unless they were consigned to an Agent at Trippatore, who would have had to arrange for their despatch by bandies from thence. Moreover, the rates offered by Contractors at Trippatore were including Railway charges higher than from Madras to Kurnool direct, the adoption of which route has proved to be the cheapest.

No. 372. ORDER THEREON, 17th May 1862, No. 1,076.

1. The Government accept the several explanations afforded in the above letter.

2. With reference to the enquiry in paragraph 9 of the Order, dated 10th March 1862, No. 397, whether Tenders had been called for by public advertisement for the carriage of Stores, and whether advantage had been taken of the Railway for a portion of the distance, the Consulting Engineer in paragraph 5 answers only a part of the enquiry. It is not stated whether the present contract was obtained by public competition.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 373. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 1st May 1862, No. 286/Gm'111.

Read the following letter from G. S. FORBES, Esq., Collector of Ganjam, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Chetterpore, 23rd April 1862, No. 46:—

SIR,

1. I observe that the construction of the District Engineer's Office which has been sanctioned for this year's Budget has been made conditional.

2. It is, however, most important that the District Engineer's head-quarters should be established here with as little delay as possible, much time being unavoidably sacrificed so long as the Collector's and Engineer's Offices are at different places, besides that it becomes necessary to correspond on numerous little matters which would be best disposed of *viva voce.*

3. As it is now certain that an increased grant will be made for Public Works out of the declared surplus of the year, there can, I imagine, be no risk whatever in commencing the building at once, and I earnestly solicit sanction to do this. The District Engineer is quite as anxious as myself on the subject.

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1 Letter from the Collector of Ganjam, dated 23rd April 1862, No. 46.

Rupees 3,110.

Submitting to Government letter No. 46, dated 23rd April 1862, from the Collector of Ganjam, and recommending that sanction be accorded for commencing the Engineer's Office and Store Yard at Chetterpore from the Reserve Fund of 1862-63, pending the increased grant of funds to meet the demand for conditional entries in the Budget List for the same year.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 374. ORDER THEREON, 17th May 1862, No. 1,077.

Under the circumstances stated by the Collector, and on the recommendation of the Acting Deputy Chief Engineer, Northern Circle, the Government grant authority for the execution of the work marginally noted from the Reserve Fund of the current year.

District Engineer's Office and Store Yard, estimate Rupees 3,110, marked A in the Budget of 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 375. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 2nd May 1862, No. 287/V 93:—

SIR,

With reference to Order No. 881, under date 30th April 1862, sanctioning an outlay of Rupees 810 upon Kellagedda tank in the Vizagapatam District, I have the honor to state the amount in question must be allotted out of the Reserve Fund for 1862-63.

No. 376. ORDER THEREON, 17th May 1862, No. 1,078.

The Government grant authority for a sum of Rupees 810 being placed at the disposal of the District Engineer, Vizagapatam, from the Reserve Fund of the current year, for the work mentioned by the Acting Deputy Chief Engineer, Northern Circle.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 377. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 2nd May 1862, No. 84.

Read the following letter from Major J. F. STODDARD, Acting District Engineer, Godavery, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Dowlaishwaram, 15th April 1862, No. 1,571 :—

SIR,

1. I have the honor to inform you that an old wooden flat was swept away from its moorings on the night of 20th October last during a storm and has not been recovered. This would have been reported before, but Lieutenant Magnay forgot to bring the circumstance to my notice till the 20th February last.

2. The flat was moored as usual to a stake near the Light House at Coconada, and was in charge of the Peon or Lascar who had the custody of the stores. I do not, however, consider he was to blame, as the storm happened after it became dark, and the wind and tide would very quickly swamp such a boat.

3. The value of the flat as borne on the District Store Return is Rupees 300, but that was its stock value in 1859. As it had been in constant use since then with a dredge, its real value when lost, was probably not a hundred Rupees.

4. I have the honor to request, however, that its stock value, viz., Rupees 300, may be written off my Returns to "Profit and Loss."

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1 Original letter No. 1,571, dated 15th April 1862.

Submitted for the information of Government with a recommendation for authority to write off the stock value (Rupees 300) of the old wooden flat reported to have been lost to "Profit and Loss" in the accounts of the Godavery District.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 378. ORDER THEREON, 17th May 1862, No. 1,070.

1. Sanctioned accordingly.

2. The Government consider that Lieutenant Magnay is very much to blame for neglecting to report the loss of the flat until four months after its occurrence, and direct that he be reprimanded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 379. Read the following Endorsement of the Consulting Engineer for Irrigation and Canal Company, dated Chepauk, 2nd March 1862, No. 2.

Read the following letter from F. AGNEW, Esq., Agent Madras Irrigation and Canal Company, to Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer, Madras Irrigation and Canal Company, dated Madras, 1st May 1862, No. 140 :—

SIR,

1. In reply to your letter of the 24th instant, No. 273, I have the honor to report for your information the undermentioned leave of absence, viz :—

Mr. W. G. L. Cotton, Field Assistant to the Chief Engineer, for six months on sick certificate from the 27th March, the date of the departure of the last Steamer in that month, without pay and allowances, and privilege leave of absence from the 12th to 27th of that month, on full pay, but without allowances.

2. I beg also to enclose a copy of a Resolution passed by the Board of Directors sanctioning such leave.

Copy.

MADRAS IRRIGATION AND CANAL COMPANY.

27th March 1862.

Copy of Resolution passed at a Meeting of the Board held on this date.

Resolved :—That the leave of absence on sick certificate for a period of six months from the 1st instant, granted by the Chief Engineer to Mr. William L. Cotton be, and the same is hereby confirmed. But the Board cannot comply with the application for payment of the passage money of Mr. William L. Cotton to England, having under their consideration general regulations applicable to such cases.

(True Copy.)

(Signed) F. AGNEW, *Agent.*

Submitted for the information of Government.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
Consulting Engineer, I. & C. Company.

No. 380. ORDER THEREON, 17th May 1862, No. 1,080.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Read the following papers :—

No. 381. From Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 2nd April 1862, No. 240/Gm 70.

SIR,

1. With reference to the Orders of Government No. 547, under date 24th March 1862, I beg leave to state that in a letter from the District Engineer of Ganjam, submitted with my communication No. 222, under date the 21st ultimo, submitting for consideration Captain Philipps' project for the improvement of the Port of Ganjam, it was suggested that the Company of Sappers and Miners recently employed in tracing a road from Sankarakol to Sonepoor on the Mahanuddy should, in the event of the Ganjam river groynes being sanctioned, be allowed to undertake the dismantling of the old Fort, and the preparation of the materials to be used in constructing those works.

2. As the Company had " suffered very severely from fever," contracted in the Hill tracts above Russellcondah, Captain Philipps considered that temporary employment on the coast would tend to restore the health of the men, and better fit them for further duty in the same unhealthy region.

No. 382. Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 25th April 1862, No. 281/Gm 70.

From Captain C. G. PHILIPPS, Officiating District Engineer of Ganjam, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Berhampore, 12th April 1862, No. 432.

SIR,

1. In reply to your Memorandum No. 211, dated 3rd instant, forwarding the Order of Government, No. 547 of 24th ultimo, I have the honor to inform you, that for the present, the H. Company of Sappers is unfit for any duty, as the men are nearly all so weakened by fever as to be incapable of severe exertion.

2. In my letter No. 394, dated 6th of March, I proposed that they should be employed during the monsoon in dismantling the Ganjam Fort, and their services will again be called into requisition early in November, for work on the Ghát between Mojagodu and Kalingia, on the Sankarakol road, but within the Madras frontier. With their aid I hope to complete a practicable cart road next working season from Doorgapersaud at the foot, to Kalingia at the head of the Ghát, from which place to Sankarakol, the frontier village, the difficulties to contend with are trifling in comparison.

1 Original letter No. 432, dated 12th April 1862.

Submitting to Government, in continuation of letter from this Office No. 240 (2nd April 1862, a communication from the District Engineer, Ganjam, No. 432), 12th April 1862, stating the H. Company Sappers and Miners are at present too much weakened by fever contracted in the Hill Passes to be fit for any active duty.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 383. ORDER THEREON, 19th May 1862, No. 1,081.

From the second of the letters above recorded, the Government observe that the H. Company of Sappers and Miners are at present unfit for active duty. The District Engineer proposes to employ them during the monsoon in dismantling the Ganjam Fort, and in November next on the Ghát between Mojagodu and Kalingia on the Sankarakol road. As however in their Proceedings marginally noted, the Government have declined to sanction the project for the improvement of the Port of Ganjam, the dismantling of the Fort is unnecessary, and the District Engineer will accordingly report in what manner the Sappers may be best and most profitably employed until November next.

Proceedings 9th May 1862, No. 998.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 384. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 28th April 1862, No. 283/N 101.

Read the following letter from Captain JOHN MULLINS, District Engineer, Nellore, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Nellore, 22nd April 1862, No. 799:—

SIR,

1. With reference to my letter No. 727, dated 12th April 1862, I have the honor to inform you that Mr. Neely, the late Foreman in charge of the Quarries, died in Hospital on Saturday night the 12th instant, and was buried on the 13th.

2. This information has been received from Mr. Merrall, who states that he has received no official report of Mr. Neely's death, nor has any reached this Office.

1 Original letter No. 799, dated 22nd April 1862.

Submitting a further communication from the District Engineer, Nellore, No. 799, dated 22nd April 1862, on the subject of the recent fatal Quarry accident, and reporting that the late Foreman of the works, Mr. Neely, died in Hospital on Saturday night the 12th instant.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 385. ORDER THEREON, 19th May 1862, No. 1,082.

Recorded, with reference to Proceedings of Government No. 961, dated 6th May 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 386. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated 29th April 1862, No. 117:—

SIR,

1. In continuation of my letter of the 25th March last, No. 99, I have the honor to forward a further Account Current of the Company's Stores for the half year ending 30th June 1861. In support of the entries on the debtor and creditor sides of the Account Current, the Agent furnished a detailed Statement, showing the quantity, description, and the value of the articles received and issued, an abstract of which is given below:—

	Balance on the 1st January 1861.			Received during the half year.			Total.			Issued during the half year.			Balance on 30th June 1861.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Instruments...	19,074	7	3	5,073	0	1	24,147	7	4	2,895	7	8	21,251	15	8
Stationery...	7,630	5	2	1,880	2	2	9,510	7	4	1,466	3	1	8,044	4	3
Furniture	2,841	2	5	855		5	3,696	7	10	562	3	8	3,134	4	2
Earthwork and Masons tools...	24,009	9	10	3,181	6	10	27,191	0	8	92	5	1	27,098	11	7
Blasting tools	10,509	9	5	357	11	2	10,867	4	7	...	...	...	10,867	4	7
Brickmaking tools ...	1,125	15	0	...	...	...	1,125	15	0	...	...	...	1,125	15	0
Brickwork tools... ...	19	0	0	0	3	0	19	3	0	...	...	...	19	3	0
Carpenters and Smiths tools...	10,160	0	2	514	13	10	10,674	14	0	23	12	9	10,651	1	3
Machines and fitting shops and foundry...	9,619	4	9	...	...	...	9,619	4	9	...	...	...	9,619	4	9
Miscellaneous	13,624	4	11	648	9	7	14,272	14	6	3	15	1	14,268	15	5
General stores	36,339	5	1	1,334	7	5	37,673	12	6	757	8	5	36,916	4	1
Timber and wood ..	17,668	8	3	...	...	...	17,668	8	3	643	8	4	17,024	15	11
Tents...	9,256	15	3	554	4	2	9,811	3	5	317	3	11	9,493	15	6
Accounting books and forms...	3,033	5	8	2	8	0	3,035	13	8	58	0	3	2,977	13	5
Total ...	1,64,911	13	2	14,402	7	8	1,79,314	4	10	6,820	4	2	1,72,494	0	7

2. From this it will be observed that the total value of Stores, received during the half year, amount to Rupees 14,402-7-8, of which Rupees 11,640-10-5 are for Stores purchased by the Agent and by the Engineers in the Divisions, under the sanction conveyed in the Proceedings of Government, dated 17th April 1862, No. 792, and the remainder, Rupees 2,761-13-3, are the value of articles previously issued from and returned into the Stores, during the half year, for which the Account Current is rendered.

3. The total value of Stores issued, amounting to Rupees 6,820-4-3, has been charged to the following heads:—

	RS.	A.	P.
Construction...	18	9	7
General plant on works	3,894	14	11
Agency...	548	0	9
Engineering	922	4	2
Manufacture of Stores...	1,237	3	6
Store charges...	92	8	8
Do. on Stores received from England	106	10	8
Total	6,820	4	3

4. The Account Current and the detailed Statement, above referred to, have been duly examined in my Office and found to be correct.

5. As remarked in my letter No. 113 of the 24th instant, the column of issues does not correctly represent the articles actually in use, and that the disproportion between the receipts and issues is consequently more apparent than real, the term issues being apparently confined to such articles only as have been actually consumed. When the Rules* and Forms, recently sanctioned by Government, are brought into operation, the Store Returns will be more correctly exhibited, the value of the actual stock in Store being entered as the balance in the Account Current.

* 44 to 49.

No. 387. ORDER THEREON, 19th May 1862, No. 1,083.

1. The Account Current of the Company's Stores for the half year ending 30th June 1861 submitted with this letter is passed.

2. The value of Stores purchased up to the end of the half year amounted to Rupees 1,79,314-4-10, while that of those issued was only Rupees 6,820-4-2, the remainder to the value of Rupees 1,72,491-0-7 are in Store.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 388. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 1st May 1862, No. 22.

Read the following letter from Captain J. BEAN, District Engineer, Malabar, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Calicut, 17th April 1862, No. 377:—

SIR,

1. I have the honor to acknowledge the receipt of your Proceedings No. 12,620, dated 12th instant. The subject of purchasing Lieutenant Kennedy's House at Luckadie for a public bungalow was referred to in my letter of the 14th instant, No. 374, as I was not aware that an order on the subject had been passed by Government in the Public Works Department.

2. I do not see what funds can be appropriated for the purchase of this bungalow from the Budget allotment of 1862-63, unless Government think fit to cancel the outlay on the Editirooty Channel entered as Rupees 1,470, on the grounds that this Channel is now being deepened on an outlay of Rupees 300 from the estimate of Rupees 4,600 sanctioned as per margin for deepening the Ponany and Chowghat Canal.

Government Order No. 2,403 dated 31st December 1861.

3. This item in the Budget, however, allows for a new cut altogether, in place of the present Channel now being deepened.

4. The allotment for new works in 1862-63 amounts only to Rupees 88,516, and the large sums* included in it cannot well be appropriated in portion for the purchase of the bungalow, as they allow for the prosecution of important works.

	Rs.
* European Married Quarters	20,000
Perambadi Ghát	10,000
Mundoor Road	10,000
Karkur Ghát	10,000
Wainád Roads	30,000

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1. Submitted for the information of Government, with reference to their Proceedings No. 707, dated 8th April 1862.

1 Original letter No. 377, dated 17th April 1862.

2. Government will observe that there are not any funds available from the Malabar District allotment, for the current year, for the purchase of Captain Kennedy's Bungalow,

without detriment to other sanctioned works. The Deputy Chief Engineer, Southern Circle, has the honor therefore to recommend that the sum† required for the purchase of the bungalow in question may be sanctioned from the Reserve Fund of 1862-63.

† Rupees 1,400.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 389. ORDER THEREON, 19th May 1862, No. 1,084.

Under the circumstances mentioned, the Government grant authority for a sum of Rupees 1,400, being placed at the disposal of the District Engineer Malabar from the Reserve Fund of 1862-63, with a view to the purchase of Captain Kennedy's bungalow at Luckadie.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 390. Read the following Proceedings of the Board of Revenue, dated 29th April 1862, No. 2,711.

Read the following letter from E. B. THOMAS, Esq., Collector of Coimbatore, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, dated Coonoor, 24th April 1862, No. 96:—

SIR,

In reference to Proceedings* granting only 30,000 Rupees for the Relief Fund (of which only 9,979 Rupees are as yet available), I beg to report a circumstance showing the need and value of *early* expenditure for the object in view, in Polachy, by no means one of the worst Táluqs, the inhabitants are literally *buying* water (for drinking, for themselves and cattle) at 1 Pie per measure, brought from distance, most wells except a *few* deep and large ones being dry.

* Dated 24th March 1862, No. 1,945.

Submitted for the information of Government. The Board trust that additional funds have already been placed at the Collector's disposal with reference to the Order of Government dated 3rd April 1862, No. 668.

(A true Copy and Extract.)

(Signed) R. A. DALYELL, *Sub-Secretary.*

Transferred to the Department of Public Works for early consideration and orders.

(Signed) J. D. SIM,
Secretary to Government.

30th April 1862.

No. 391. ORDER THEREON, 19th May, 1862, No. 1,085.

1. The Government grant authority for a sum of Rupees 20,000 being placed at the disposal of the District Engineer Coimbatore, from the Reserve Fund of the current year, for the execution of works to afford relief to the suffering poor in the District.

2. In addition to the amounts sanctioned during the past year for the above object, from the general allotment of the Coimbatore District, the Government specially† allotted a sum of Rupees 10,000 from the Reserve Fund, but under the rules in force no portion of the balance which may have remained unexpended from these grants on the 30th ultimo can be used during the current year.

† Proceedings Nos. 668 and 806, dated 3-1 and 17th April 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 392. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th May 1862, No. 410:—

SIR,

With reference to the Proceedings of Government No. 920, dated 2nd instant, I have the honor to report for their information that the estimate referred to in paragraph 3 of the order in the Military Department was calculated for the repair of the whole of the huts in Perambore line as they stand at present; and not for the reduced establishment of Native Regiments. I beg also to observe that the estimate is only an approximate amount as stated in paragraph 4 of my letter No. M,222, of the 7th March 1862, and not a strictly accurate detail estimate.

No. 393. ORDER THEREON, 19th May 1862, No. 1,086.

Communicated to the Military Department with reference to the Orders in that Department, No. 1,482, dated 25th April 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 394. Read the following Proceedings of the Madras Government in the Military Department, dated 13th May 1862, No. 1,761:—

Communicating letter from the Quarter Master General, stating that no Lock Hospital will be required in future at Poonamallee. } (Vide Military Proceedings, 13th May 1862, Nos. 302 @ 304.)

No. 395. ORDER THEREON, 19th May 1862, No. 1,087.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 396. Read the following Proceedings of the Madras Government in the Military Department, dated 13th May 1862, No. 1,750:—

Communicating letter from the Controller of Military Finance together with one from the Commissary General Madras, regarding the construction of a building for Malt Liquor Store not being required and cancelling the order sanctioning the same. } (Vide Military Proceedings, 13th May 1862, Nos. 287-288.)

No. 397. ORDER THEREON, 19th May 1862, No. 1,088.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 398. Read the following Proceedings of the Madras Government in the Judicial Department, dated 13th May 1862, No. 781:—

Transferring letters from the Inspector General of Jails, stating that Tranquebar seems to be a proper place where paddy beating by wind power can be satisfactorily introduced. } (Vide Judicial Proceedings, 13th May 1862, Nos. 93-94.)

No. 399. ORDER THEREON, 19th May 1862, No. 1,089.

Communicated to the Chief Engineer for report with reference to paragraph 4 of the President's Minute, dated 25th March 1862, and to the Orders of Government No. 720, dated 9th April 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 400. Read the following Proceedings of the Right Honorable the Governor General of India in Council, Public Works Department, dated Fort William, 30th April 1862, No. 1,568 :—

Reports by the Colonel Elliot and Mr. Temple on the Central Provinces.

General scope of the Public Works authority of the Chief Commissioner, and territorial limits of his Public Works jurisdiction.

Read the following papers :—

Extract, Financial Department, No. 1,991, dated 25th March 1862.

Letter from Secretary to Chief Commissioner, Central Provinces, No. 49, dated 19th March 1862.

Letter from Officiating Secretary to Chief Commissioner, Central Provinces, No. 81, dated 29th March 1862.

Observations.—By the Financial Department Resolution now read, this Department is called upon to consider those portions of the Reports of Colonel Elliot and Mr. Temple on the Central Provinces that concern the Public Works Department. The proposals that specially affect the administration of this Department are contained in the following portions of the Reports :—

Report on Nagpoor	Paras.	86 to 111
Report on Saugor and Nerbudda Territories	,,	82 to 106
Report on Central Provinces	,,	10 to 12

These will now be considered seriatim.

I.—Public Works Establishments.

2. There is at present a completely organized branch of the Department in the Central Provinces. The distribution of the Officers has, not long ago, been revised, and generally the Executive Establishments are believed to call for no change. The Office of Account has recently been inspected by Major Chesney, Inspector General of P. W. Accounts, and a special Report has been submitted by him on the subject, on which any necessary action will be taken.

3. There are, however, three points to be considered in connexion with this subject. First, it is suggested that the Chief Engineer, Central Provinces, should be constituted Railway Consulting Engineer, and that the Chief Commissioner should have such control over the acts of the Railway Companies within the Central Provinces as is elsewhere exercised by Local Governments. Now, however desirable this arrangement may at first sight appear, there are practical objections to its adoption. The Railways that enter the Central Provinces are the extremities of the G. I. P. Railway, having its head quarters at Bombay, and of the Jubbulpoor Branch of the E. I. Railway, a line having its chief management in the N. W. P. and Bengal. It would obviously not be expedient to constitute fresh Agencies at Nagpoor and Jubbulpoor for the sole purpose of enabling the powers of the Government in relation to these Railway Companies to be exercised by the Chief Commissioner of the Central Provinces. To do so would needlessly add to the expense of existing arrangements, and to the difficulties already attendant on Railway control.

4. But although the powers of Government in dealing with the Railways in question must, in the opinion of His Excellency the Governor General in Council, continue to be exercised by the Government of Bombay on the one side, and by the Government of the N. W. P. on the other, as at present arranged, H. E. sees no objection to the Consulting Engineers of these two Governments communicating with the Chief Commissioner on all matters affecting the interests of the traffic on the portions of the lines passing through the Central Provinces. It will therefore be intimated to those Governments that it is the wish of the Government of

India that the Chief Commissioner should be consulted on all matters of moment affecting the interests of the public, in connexion with the portion of the Railway passing through the Provinces under his administration, and that any suggestions that he may offer on any such matter should be received and considered prior to any decision being come to. The G. G. in C. does not consider it necessary to lay down any forms of procedure in this matter, as the details can be best arranged by the Governments concerned. H. E. in C. would only remark that the correspondence in behalf of the Chief Commissioner may conveniently be carried on in the P. W. D.

5. The second point is the proposal to give the Chief Engineer in the Central Provinces the position of Secretary to the Chief Commissioner in the P. W. D. On this a reference has been made in a separate letter, No. 49, dated 19th March. Being in accordance with the practice in other Administrations and otherwise unobjectionable, H. E. the G. G. in C. is pleased to sanction this arrangement. The Officer holding the position of Chief Engineer, while retaining his powers as such, will therefore become, in addition, Secretary to the Chief Commissioner in the Public Works and Railway Departments.

6. Thirdly, it is proposed by the Officiating Chief Commissioner that the limit of his authority in giving sanction to works should be extended from Rupees 5,000 to Rupees 10,000. This being in accordance with the practice adopted in the case of the Chief Commissioners of Oudh, British Burmah, and Mysore, it may be granted.

II.—Public Works—Military and Civil.

7. No special remarks are necessary on the suggestions made as to specific works. They will be most conveniently dealt with in regular course in disposing of the P. W. Budget of the Central Provinces for 1862-63.

III.—Transfer of the Godavery Navigation Works from Madras to the Central Provinces.

8. The suggestions on this head appear to the G. G. in C. to be worthy of consideration. There can be no doubt that the Godavery Navigation is a matter that mainly, if not almost exclusively, concerns the interests of the Nagpoor Provinces; but as the works have been till now under the Madras Government, and as that Government has long been conversant with the whole subject in all its details, the G. G. in C. desires, before coming to a decision on the subject, that the Government of Madras should be invited to submit its opinion on the proposed transfer. It will be proper to remind the Government of Madras that the measure, if carried out, will involve the transfer of Captain Haig and the other Officers now employed on the works, to the P. W. Dept. of the Central Provinces, and that to ensure the successful working of the change, the cordial co-operation of the Madras Public Works Officers on the Lower Godavery will have to be given to the Government of the Central Provinces.

IV.—Military Posts at Nagode and Nowgong.

9. On this point the G. G. in C. will only remark that if the Garrisons of these posts are supplied from Saugor or Jubbulpoor, the P. W. Establishments should also be under the Government of the Central Provinces. If the troops come from any Station in the North-Western Provinces, the P. W. Officers should be under the N. W. P. Government.

V.—Limit of jurisdiction of the N. W. P. and the Central Provinces on the Great Deccan Road, and on other Roads passing through Bundelkhund.

10. The intervention of the State of Rewah between the Central and North-West Provinces on the Great Deccan Road makes the proper limit of jurisdiction over this road somewhat doubtful. The same remarks apply to the road jurisdictions at other points of the Northern frontiers of the Central Provinces. H. E. the G. G. in C. is of opinion that the exact boundaries of the Public Works jurisdictions can best be settled between the Chief Commissioner and the Government of the N. W. P. A report of the proposed settlement should be submitted for approval to the Government of India.

ORDER.—Ordered, that the above Resolution be communicated to the Financial Department, in reply to Extract No. 1,991 of 25th March 1862.

To the Government of Madras for the purpose indicated in paragraph 8.

To the Government of Bombay, with reference to paragraphs 3 and 4.

To the Government of the N. W. P., with reference to paragraphs 3, 4, 9 and 10.

To the Chief Commissioner, Central Provinces, for information and guidance.

(Signed) R. STRACHEY, *Lieut.-Colonel.,*
Secretary to the Government of India.

No. 401. ORDER THEREON, 19th May 1862, No. 1,090.

Ordered that the following letter be despatched to the Government of India:—

(Signed) W. H. HORSLEY, Lieutenant.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 402. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government Public Works Department, Fort Saint George, to the Secretary to the Government of India, D. P. W., dated 19th May 1862, No. 1,091.

SIR,

1. I am directed by His Excellency the Governor in Council to acknowledge the receipt of Proceedings of the Right Honorable the Governor General in Council No. 1,568 of the 30th ultimo, and, with reference to paragraph 8 relating to the transfer of the Godavery Navigation Works to the Central Provinces, to state that, in the opinion of His Excellency in Council, it is a change much to be desired, for, inasmuch as the Chief Commissioner of those Provinces has a direct interest in a work which will provide a communication from the interior to the Coasts and is in a more favorable position to command labor and exercise efficient supervision, he will also be best able to estimate the value of trade likely to flow from the interior to the Coast, and will therefore be in a better position than the Government of Madras can ever be to determine the importance of the undertaking and the character of the works required to perfect it.

2. I am directed further to add that this Government will be prepared to transfer the services of Captain Haig and the other Officers now employed on the Godavery together with all the plant, steamers, boats, &c., which have been provided for the transport of goods, as well as to render the most cordial co-operation and assistance in the working of this change.

3. It is possible that, in carrying out the best scheme for the improvement of the navigation, an Anicut will be required about twenty miles above Rajahmundry. This Anicut the Government of Madras would desire themselves to construct for the sake of the extension which it would afford to the system of irrigation already established in the Godavery District.

No. 403. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 24th April 1862, No. 13:—

SIR,

1. With the first of the accompanying letters,* the Agent submitted several Indents for various Stores, amounting to £2,712-0-2½† received from the Chief Engineer, merely requesting that the sanction of Government might be obtained thereto, whereupon I drew his attention to the fact that no intimation had yet been made as to whether the articles included in the Indents hitherto sanctioned had been supplied, or what portion of them had been issued, that many of the articles in the present Indents were identical with those contained in the previous Indents, and that therefore until some definite information was before the Government on the subject, it would be premature to submit Indents for further similar supplies.

* Dated 7th January 1862, No. 7.
Do. 28th March " " 100.

	£	s.	d.
† No 31, Stationery...	155	8	0
" 32, Tools.. ...	439	13	11
" 33, Machinery ...	574	1	8
" 34, Files, Steels and Jumpers ...	366	13	9
" 35, Iron	558	15	0
" 36, Iron Mongery	366	11	6½
" 37, Oilmen Stores.	202	1	10
" 38, Turning	48	14	6
Total....	2,712	0	2½

2. To this, the Agent replies in the accompanying letter, stating that the Indents now submitted are quite distinct from those sanctioned, and sent home in September last, and that the whole of the stores included in previous Indents will in all probability reach Madras before the end of the current year.

3. He further represents that twelve months will elapse before the receipt of the Stores now indented for, and that it is therefore highly desirable to take steps to procure others before those now in course of shipment are entirely consumed.

4. The Government having in Proceedings of the 4th December 1861, No. 2,233, remarked that the issue of stores appeared to be very small as compared with the receipts, I requested that further particulars might be furnished, upon which the Agent has referred me to his Statement of Stores compiled up to 30th June 1861, from which it would appear that the receipts amount to Rupees 1,79,314-4-10, while the issues are only Rupees 6,820-4-3.

5. On examining the Statement however, and comparing it with the Agent's replies given to my Memorandum of objections I find that articles are said to have been all issued, which in the Statement are yet classed amongst the *remains*, from which I gather that only articles which have been actually *consumed* are considered as issued, and hence the great disproportion of issue to receipts. For instance of the articles marginally‡ shown the greater portion is stated to have been all issued and in use, and more of the same still required. So with the tools which since the re-commencement of operations in July last have doubtless been supplied to workmen. It is probable therefore that a further supply is required, and I accordingly forward the present Indents for sanction; as the Agent states that he cannot reduce the quantities indented for, but I am unable to add that the explanations conveyed in his letter§ are satisfactory.

‡ Iron.
Tents.
Mathematical Instruments.
Stationery.

§ Dated 28th March 1862, No. 100.

6. In the forms for the Store Accounts submitted with my letter|| of the 8th February 1862, and since sanctioned, provision is made for the issue of stores being represented, so as to show the value of articles *in use* as well as of those which have been actually consumed.

|| No. 78.

7. Under these circumstances I beg to recommend the Indents being sanctioned for transmission to the Board of Directors in England.

No. 404. ORDER THEREON, 20th May 1862, No. 1,092.

The Government approve of the Indents for Stores submitted with this letter amounting to £2,712-0-2½ proposed to be procured from England for the Irrigation and Canal Company's works.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 405. Read the following letter from Lieutenant-Colonel S. O. E. LUDLOW, Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 14th May 1862. No. 304/G95:—

SIR,

In accordance with the instructions of Government contained in their Proceedings No. 1,001, dated 9th instant, I have the honor to solicit that sanction may be accorded to the estimate, amounting to Rupees 9,200, for constructing two iron lattice girder bridges in the Godavery District from the Reserve Fund of 1862-63.

No. 406. ORDER THEREON, 20th May 1862, No. 1,093.

The Accountant General will be good enough to place the sum of Rupees 9,200, referred to in this letter, at the disposal of the District Engineer, Godavery, from the Reserve Fund of the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 407. Read the following letter from Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 1st May 1862, No. 4:—

SIR,

1 Letter No. 301, dated 2nd April 1862, from District Engineer Tinnevelly, with one accompaniment.
1 Do. No 1,811, dated 3rd April 1862, from District Engineer Madura.
1 Do. No. 360, dated 3rd April 1862, from District Engineer Tanjore.
1 Do. No. 604, dated 4th April 1862, from District Engineer Coimbatore.
1 Do. No. 367, dated 8th April 1862, from District Engineer Malabar.
1 Do. No. 2,157, dated 16th April 1862, from District Engineer Trichinopoly.

1. On the receipt of the Orders of Government, dated 20th March 1862, No. 505, the several District Engineers in the Southern Circle were called upon to report whether any of the 2nd Class Sub-Overseers employed under their respective orders were eligible for promotion to the 1st Class on the grounds of long service and distinguished merit, and as all have replied to the requisition, with the exception of the District Engineers of South Arcot and Salem, I have thought it proper now to submit for orders their several letters on the subject.

2. The District Engineers of Coimbatore and Malabar report that in their Districts there are no Sub-Overseers of the class referred to, who are qualified for the promotion in question; but the District Engineer of Tanjore, in giving the same information, states, that there is one C. Shadagopum entertained in October 1858, who has since obtained from the Civil Engineering College the Certificate of an Assistant Overseer, whom he considers deserving of promotion to the grade of Sub-Overseer 1st Class. Captain Oakes remarks that although the man is not very brilliant yet he believes him to be honest, and to have acquired sufficient experience to carry out work. The District Engineer of Trichinopoly recommends that Sooboroy Pillai, 1st Class, 1st Grade, should be transferred to Madura and that a passed Candidate at the approaching examination at the Civil Engineering College should be sent to Trichinopoly in his stead, while the District Engineer of Tinnevelly reports that although there is a Sub-Overseer in that District eligible for promotion, on the ground of service, yet that it is by no means desirable that his services should be withdrawn therefrom.

In letter, dated 3rd April 1862, No. 360.

In letter No. 2,157, dated 16th April 1862.

No. 1,811, dated 3rd April 1862.

3. With these letters was also received one from the District Engineer of Madura, urging a re-consideration of the Orders of Government contained in paragraph 3 of the above Proceedings, on the subject of the employment of Lutchmanarsoo Iyen, as a Sub-Overseer of the 1st class.

4. Captain Ryves states that this man was originally a Sub-Overseer on the permanent strength of the Department, prior to the reduction effected in July 1857, that it will be hardly possible to find a better man to fill the post of 1st Class Sub-Overseer in the Madura District, that he knows the District well, has great command of labor, is naturally a clever man, has very considerable engineering ability, and is peculiarly fitted for the situation he has been recommended for; under these circumstances I have the honor to request that as a special case, the appointment of Lutchmanarsoo Iyen to the rank of Sub-Overseer 1st Class, 3rd Grade, may be authorized.

5. As respects the two other vacancies in the Lower Subordinate Establishment, I am of opinion that the best and most regular arrangement that can be made, is to transfer to the Madura District, Sooboroy Pillai of the Trichinopoly District, and C. Shadagopum of the Tanjore District, the former to continue to serve in his present capacity of Sub-Overseer 1st Class, 1st Grade, and the latter to be promoted to the rank of Sub-Overseer 1st Class,

3rd Grade, and I accordingly recommend that such may be sanctioned. The strength of the lower Subordinate Establishment in Madura will then be as follows :—

Rank and Name.	Sanctioned allotment.	Actual strength.
Sub-Overseers, 1st Class.		
Sooboroy Pillai, 1st Grade...	6	6
Muttuswámi Pillai, 3rd Grade ...		
Rungaswámi Pillai, 3rd Grade. ...		
C. Shadagopum, 3rd Grade... ...		
Mr. O'Doherty, 3rd Grade...		
Lutchmanarsoo Iyen, 3rd Grade. ...		
Sub-Overseers, 2nd Class.		
Gopal Pillai, 1st Grade.	2	2
Subramania Pillai, 3rd Grade... ...		

6. To supply the places of Sooboroy Pillai and C. Shadagopum in the Trichinopoly and Tanjore Districts, the District, Engineers will be instructed to obtain passed Candidates should their transfer to Madura be authorized.

7. In conclusion I beg to observe that the District Engineer reports that the present state of the Executive Establishment in Madura is utterly inadequate for the ordinary executive work of the Department, and that it is therefore very desirable that efficient Subordinates should be placed at his disposal as soon as possible.

No. 408. ORDER THEREON, 20th May 1862, No. 1,094.

1. The Government approve of the promotion of C. Shadagopum from the rank of Sub-Overseer 2nd Class, 2nd Grade, to that of Sub-Overseer 1st Class, 3rd Grade, and of his transfer from the Tanjore to the Madura District. They also approve of the transfer of Sub-Overseer Sooboroy Pillai from Trichinopoly to Madura.

2. Under the circumstances stated in paragraph 4 and on the strong recommendation of the Deputy Chief Engineer, Southern Circle, coupled with the great want of Subordinate agency in the Madura District, the Government sanction the entertainment of Lutchmanarsoo Iyen, at present temporary Sub-Overseer 2nd Class, 3rd Grade, as Sub-Overseer of the 1st Class, 3rd Grade.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 409. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 12th May 1862, No. 443:—

SIR,

With reference to the Proceedings of Government, No. 950, dated 5th instant, I have the honor to suggest that the difference* between the estimated amount and that provided for in the Budget of 1862-63, for the Malt Liquor Godown at Madras, shall be met from the Reserve Fund of the current official year.

* Rupees 1,740.

No. 410. ORDER THEREON, 20th May 1862, No. 1,095.

Under the Orders of Government in the Military Department No. 1,750, dated 13th May 1862, the sum applied for by the Acting Deputy Chief Engineer, Central Circle, on account of the Malt Liquor Godown at Madras will not be required.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 411. Read the following Proceedings of the Madras Government in the Military Department :—

Referring to His Excellency the Commander-in-Chief the question of the plans and estimates for the accommodation of Married Soldiers of the Artillery at the Mount. } (Here enter 13th May 1862, No. 1,769.)

No. 412. ORDER THEREON, 20th May 1862, No. 1,096.

Communicated to the Chief Engineer and Deputy Chief Engineer, Central Circle, with reference to paragraph 6 of the Proceedings of Government, No. 956, dated 5th May 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 413. Read the following Endorsement of the Officer in charge of the Audit and Account Departments, dated Chepauk, 29th April 1862, No. 13,048.

Read the following letter from Captain R. F. OAKES, District Engineer, to the Deputy Chief Engineer, Public Works Department, Southern Circle, dated Tanjore, 14th April 1862, No. 375 :—

SIR,

1. In continuation of my letter No. 264, dated 13th January 1862, I have the honor to enclose an Abstract Statement of the sums adjusted up to 31st March from the outstanding balances of previous years which the Deputy Collector is adjusting.

2. The recoveries have not been made so rapidly as I anticipated, owing to a new Deputy Collector having been appointed to undertake the work; he has however been requested to expedite the adjustment of the outstanding balances.

3. The balance remaining to be adjusted is Rupees 2,393-7-2. Owing to Contractors who had prepared materials for works having declined to permit the Department to remove them, a further sum of Rupees 200 was added to the list in February and a sum of Rupees 70 in March; the latter has been recovered.

4. Of the sums recovered, Rupees 5,418-0-9 have been drawn from the Treasury, and Rupees 1,969-10-7 is the balance still at the disposal of this Department in the local Treasuries. The sums drawn have not been adjusted in Statement Form 2, as some of the amounts recovered have already been included in advance Bills and credit has been taken for them. Nor has the sum of Rupees 1,828-1-6 ordered* to be written off to "Profit and Loss" been deducted in Statement Form 2. It is proposed to make the necessary deductions after the final adjustment of the outstanding advances has been completed, but in the meantime the amounts remaining unaccounted for in 1858-59 and 1859-60 in Form 2 will appear to be larger than they really are.

* Proceedings of Government, No. 2,185, dated 27th November.

Abstract Statement showing the amount of outstanding advances in the different Ranges referred to the Deputy Collector, amount recovered and the balance remaining to be recovered on the 31st March 1861.

Range.	Date of submission of the Lists of outstanding advances to the Deputy Collector.	Amount of Lists.			Amount recovered or adjusted by work by Department Public Works since.			Balance amount to be disposed of by the Deputy Collector.			Amount ordered by Government to be struck off.			Amount recovered by the Acting Deputy Collector up to 31st March.			Total of Columns 6 and 7.			Balance remaining to be recovered.			Amount drawn by the Department Public Works from the amount shown to have been recovered in Column 7.			Difference of Columns 7 and 10.		
1	2	3			4			5			6			7			8			9			10			11		
		RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
1st Range	11th October 1860......	6,463	1	8	276	8	5	7,733	7	5	1,828	1	6	3,869	15	5	5,698	0	11	2,035	6	6	2,838	5	7			
	28th February 1861 ...	1,546	14	2																								
3rd Range	22nd March 1861	163	6	3	......	...	...	163	6	3	......	...	...	193	6	3	193	6	3	......	...	...	......	...	...			
	14th November 1861...	30	0	0	......	...	...	30	0	0																		
4th Range	14th August 1860	2,579	7	8	343	13	0	2,435	10	8	....	...	...	2,155	10	8	2,155	10	8	280	0	0	2,010	5	4			
	26th February 1862 ...	200	0	0																								
5th Range ...	5th February 1861 ...	1,238	3	8	31	8	0	1,206	11	8	......	...	...	1,128	11	0	1,128	11	0	78	0	8	599	5	10			
6th Range ...	21st March 1862	70	0	0	......	...	...	70	0	0	......	...	...	70	0	0	70	0	0	......	...	...	....	...	...			
	Total.........	12,291	1	5	651	13	5	11,639	4	0	1,828	1	6	7,417	11	4	9,245	12	10	2,393	7	2	5,448	0	9	1,969	10	7

District Engineer's Office,

Tanjore, 14th April 1862.

(Signed) R. F. OAKES, Captain,

District Engineer.

1 Original letter No. 375, dated 14th April 1862, with 1 enclosure.

Submitted to Government with reference to their Proceedings dated 20th February 1862, No. 273. The Statement Form 2 referred to in the 4th paragraph of the District Engineer's letter is one of several lists separately forwarded to this Office, showing the balances unadjusted at the time that Captain Oakes delivered over charge of the Tanjore District.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In-charge of the Audit and Account Departments.

No. 414. ORDER THEREON, 20th May 1862, No. 1,097.

The Government notice from the above report that of the sum of Rupees 3,243-11-5 which remained unrecovered on the 31st December last, Rupees 850-4-3 have been recovered during the Quarter ended 31st March 1862, leaving a balance of Rupees 2,393-7-2 which the Government confidently hope will soon be adjusted.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 415. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 29th April 1862, No. 13,032:—

SIR,

1 Letter from the Acting District Engineer Bellary, No. 538, dated 1st April 1862.
1 Do. No. 469, dated 25th February 1862.
1 Do. No. 389, dated 6th January 1863.
2 Plans.
1 Estimate.
1 Specification.
1 Copy of correspondence marked 4-19,105, 1862.

1. I have the honor to forward plans, specification and an estimate, amounting to Rupees 5,500, for certain improvements which it is proposed to make in connection with the Byrapoor and Locherla tanks in the Pengondah Táluq of Bellary. Both tanks are of the first class, and are Government property, but they are at present so badly supplied with water and in such bad condition that the Revenue derived from the cultivation under them is very trifling.

2. The proposed improvements consist of building an Anicut across the river Pairoo at the site where temporary bunds used formerly to be annually constructed, improving the supply channel from thence to the Byrapoor tank, cutting a new channel to convey the surplus water from the Byrapoor to fill the Locherla tank; and raising the bund, extending the surplus Calingulah, and building an additional irrigation sluice, to the Locherla tank.

3. By these improvements the rain-fall discharge of 80 square miles will be turned into these tanks, which according to the District Engineer's moderate computation of ⅛th of the annual fall of 18 inches being discharged, would yield sufficient for 2,000 acres of land considerably more than four times the extent that it is proposed to bring under cultivation. The existing Revenue from irrigated land under the Locherla tank is Rupees 644. And under the Byrapoor tanks, Rupees 64. The increase Revenue which will follow on the improvements which are proposed being carried out is under the Locherla tank .... Rupees 2,484
Under the Byrapoor tank .... ,, 264
,, 2,748

Deduct		
Present assessment on dry land to be irrigated, 347 acres at 4 Annas, at Locherla tank	Rupees	87
Ditto on 35 acres at 6 Annas at Byrapoor tank.......	,,	13
Loss by cessation of the manufacture of bangles in the bed of the Locherla tank..	,,	50
Total deductions	Rupees	150
Balance increase of Revenue	Rupees	2,598

4. It will be observed that the expenditure is for the most part in connection with the Locherla tank, and that very little increase of Revenue is contemplated under the Byrapoor tank, which is owing to its bund being in a very leaky and bad condition: yet the additional supply will enable the Reddy of Byrapoor to cultivate an additional 60 acres, and the Collector has taken from him a written agreement to that effect, also one from the Ryots of Locherla that they will cultivate an additional 370 acres, yielding Rupees 2,484.

5. The project appears a most desirable one, promising to yield a profit of more than 47 *per cent. per annum* on the outlay, and I recommend it for sanction from the Reserve Fund of the coming official year.

No. 416. ORDER THEREON, 20th May 1862, No. 1,098.

1. The estimate amounting to Rupees 5,500, submitted with the above letter, provide for improvements to the Byrapoor and Locherla tanks in the Bellary District, by which a large additional and more certain supply of water will be afforded, and the area cultivated be increased by 430 acres and the Revenue by Rupees 2,598.

2. The improvements, it is observed, consist of a low Anicut instead of the temporary bunds which before were constructed yearly, improving the channel thence to the Byrapoor tank and cutting a new channel to convey the surplus water to the Locherla tank, the bund of which is to be raised.

3. The work being of a highly remunerative character, and the Revenue authorities having obtained the necessary agreements from the villagers, the Government resolve to sanction the immediate construction of the work, the amount being provided from the Reserve Fund of the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 417. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 12th May 1862, No. 423:—

SIR,

1. I have the honor to submit, for the orders of Government, an application from the District Engineer of the Presidency to be allowed to write off to "Profit and Loss" certain Gutta-percha tubing, valued at Rupees 944-12-6, which is at present borne on his books under the head of Advances for District Stores, as the article is perfectly useless.

1 Letter from the District Engineer, Presidency, No. 3,029, dated 26th April 1862, with one enclosure.
1 Do. No. 21, dated 2nd May 1862.

2. From the enclosure of Lieutenant-Colonel Hitchins' letter it will be observed that the tubing was procured from England by Major Rawlins when Garrison Engineer, acting under the orders of the then Honorable the Governor, it being intended to be used as speaking tubes for communicating with the various apartments of the several public Offices in the Fort. Prior to its arrival from England however Zinc tubing had been tried and found to answer well, and it would appear consequently that on the arrival of the Gutta-percha tubing there was no immediate use for it, and it has remained in store. Partly in consequence of its lying by, and partly I am inclined to think from its being of inferior quality it is now perfectly useless, being brittle and

pliable. It is too late now to make any objection regarding its quality to the parties who supplied it, as it has been more than three years in store. If there was a manufactory for working such material in Madras it would no doubt realize the greater portion of its original cost, but as there is not it cannot be expected to sell for much. I would therefore recommend its being shipped to England and consigned to Messrs. Smith & Elder to realize what they can for Government by the sale of it. Messrs. Smith & Elder supplied it.

No. 418. ORDER THEREON, 20th May 1862, No. 1,099.

Taking into consideration the charges on account of freight and the probable losses from breakage and other causes, the Government are of opinion that it would not be advantageous to send to England for sale the Gutta-percha tubing referred to in this letter, and they accordingly direct that it be sold at the Presidency by auction for what it will fetch. A report of the amount realized by the sale should be submitted to Government, when authority will be granted for writing off to "Profit and Loss" the difference between that sum and the original cost of the tubing.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 419. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 2nd May 1862, No. 1 :—

SIR,

I have the honor to submit for the favorable consideration of Government a letter* received from the Agent together with a copy of the Resolution passed by the Board of Directors, dated 27th March last, sanctioning an increase of salary to the Chief Engineer from Rupees 1,250 to 2,000 per mensem.

* 1st May 1862, No. 142.

No. 420. ORDER THEREON, 21st May 1862, No. 1,100.

His Excellency the Governor in Council concurs in the Resolution of the Board of Directors to increase the salary of their Chief Engineer from Rupees 1,250 to Rupees 2,000 per month.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 421. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 1st May 1862, No. 18.

Read the following letter from Captain W. C. PALMER, Acting District Engineer, Trichinopoly, to the Deputy Chief Engineer, Southern Circle, dated Trichinopoly, 24th April 1862, No. 2,178 :—

SIR,

1. With reference to Government Order No. 706 of the 7th instant, and the instructions in Proceedings No. 12,586 of the 11th instant, directing me to report the name of the Officer who

is responsible for omitting to object to the quality of the timber supplied from the Anamallai Forests at the time of purchase, I have the honor to report that in consequence of the distance of the Forests from Trichinopoly, and the paucity of Officers in the District, Captain Ryves was unable to go himself or to detach an Officer for the purpose of selecting the timber, and he applied to the Conservator of Forests, Dr. Cleghorn, stating his urgent need of Teakwood and asking him to furnish the quantity required, on which a list of the dimensions of Teak logs placed at Captain Ryves' disposal was forwarded to him by Lieutenant Beddome, Assistant Conservator of Forests.

In a letter No. 1,296 of 22nd January 1858.

With letter No. 318 of 26th February 1858.

2. Captain Ryves thereon sent a Conicopoly to the foot of the Hills to receive the timber and despatch it by carts to Trichinopoly, and at the same time wrote to the Conservator of Forests as follows:—"I have the honor to inform you that I "have nominated one Soondrum Mudali as Timber Conicopoly "to receive the logs lately selected for the use of the Euro- "pean Barracks at Trichinopoly."

In letter No. 33 of 5th May 1858.

3. After several bandies had been despatched, the Conicopoly wrote to say he had heard reports that the timber given to him had been cut ten years before, and rejected by the Commissariat Department, and in his opinion it was very bad, on which Captain Ryves ordered him to send only good logs, and many were subsequently rejected on the spot.

4. From the letters quoted above it appears that Captain Ryves not being able to go himself or to send an Officer, entrusted the selection of the timber to the Conservator of Forests, in the belief that good timber would be supplied, and I submit that Lieutenant Beddome ought at the time of sending the list of logs to have mentioned the fact brought to notice by Captain Brine, as Captain Ryves could not have supposed that the Government Officer who was asked to select the timber for him would have sent old inferior logs that had long been exposed to the weather and had before been rejected, without acquainting him of the condition of the wood.

In letter No. 197, of 8th March 1862, quoted in Government Order under reply.

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Submitted for the information of Government, with reference to their Proceedings No. 706, dated 7th April 1862.

1 Original letter No. 2,178, dated 24th April 1862.

(Signed) W. I. BIRDWOOD, Colonel,
Deput Chief Engineer, Southern Circle.

No. 422. ORDER THEREON, 21st May 1862, No. 1,101

The Government consider the conduct of the Forest Department as explained in the letter from the District Engineer, Trichinopoly, submitted with the foregoing Endorsement, inexcusable, and the Officer in charge of that Department is informed that Government will not be disposed to pass over again any similar proceeding in future.

(Signed) W. H. HORSLEY, Lieutenant.-Colonel,
Secretary to Government.

No. 423. Read the following letter from T. MOSS, Esq., Assistant Secretary to Government, North Western Provinces in the Public Works Department, to the Secretary to Government, Public Works Department, Fort Saint George, dated Allahabad, 18th March 1862, No. 318 :—

SIR,

Report on Pendulous Lever Punkahs adapted to machinery or hand labor with plan.
Proceedings of a Special Committee upon Punkah pulling, &c.
Comparative Statement of cost of Punkah pulling Establishment.

In compliance with the request contained in your letter No. 229, dated the 15th ultimo, I am directed by His Honor the Lieutenant Governor to forward copies of the papers marginally noted, regarding Mr. Assistant Supervisor Grant's method of hanging and pulling Punkahs.

Report on Pendulous Lever Punkahs adapted to machinery or hand labor.

In the project for "Self-acting Punkahs and Tatties," submitted on the 15th January last to Chief Engineer, N. W. Provinces, it was shown why punkahs could not be considered effective, or could not be worked by machinery, unless they had a simultaneous uniform motion, and unless the power which moved them could be applied to the backward as well as to the forward swing. It was also shown that these requirements could not be obtained under the present system of suspending punkahs, and that what was required to render punkah-pulling efficient was, not the constructing or adapting a machine to pull punkahs, but an alteration in the construction of the punkahs themselves, so that their movement might be regulated and adapted to that of a machine.

Punkahs on the old principle are "pendulous," each punkah having a distinct circular motion of its own, and the rope which moves them is generally applied horizontally and pulled obliquely, and supposing that it were possible to combine those distinct motions, so as to give one uniform swing, and supposing that the ropes would not break or stretch, yet the movement for want of a repelling power would not coincide with that of a machine, for a number of punkahs so connected and pulled could not perform their backward and forward swing in equal periods, or in the same time that the piston or crank of a machine would make a stroke or revolution ; to this must be added the great length of "pull" required under the old system, which in connection with a machine would cause a loss of power.

The principal feature in my plan is the substitution of a lever (or handle) for the rope used in suspending punkahs under the old system ; each punkah being in reality a pendulous lever governed and worked by lever power. The punkahs themselves differ only from those in use at present by having a (handle or) lever fixed to their centre, to which the motive power is applied, and by which it is suspended, as in the case of the palm leaf punkah. The "fan" is made as light as is consistent with durability. The handle of the punkah being fixed by a knuckle or compass joint to a wrought-iron pivot screwed through the punkah beam, and fastened by a nut on the other side ; this is all that is necessary to suspend the punkahs, but check ropes are given to secure a steady movement, and they add much to the appearance and rigidity of the punkah.

The plan admits of ornamental work being introduced, and of the punkah being made of any shape or form.

The punkahs are pulled by means of two wires fixed to the lever or punkah handle at equal distances, one above and the other below the pivot or fulcrum ; these wires when moved have a parallel movement, and the power which repels the one propels the other, thereby securing an equal and steady movement, and preventing the possibility of a jerk or bend. They are fixed so near the pivot or centre of motion, that it is only necessary to pull the wire a few inches to give to the punkah a swing of 8 feet.

The ends of these wires are fixed to the extremities of two bent levers, fixed to a post placed for the purpose in the verandah or any convenient position. To these levers are attached "pedals" if worked by a coolie, and as one descends while the other ascends, the motion

coincides with the movement of a coolie's feet, or with that of a double crank if worked by a machine. The upper or repelling wire being attached to the short arm of the lever, would require a greater power to pull it than the lower or propelling wire, which is attached to the longer arm of the lever. This want of leverage is compensated for by fixing a balance weight on the upper lever, so as to form a counterpoise and maintain equilibrium.

The weight of the punkah as required for Barracks need not exceed 16 seers, and the cost if made new, need not exceed that of a similar sized punkah on the old plan, and old punkahs could be adapted to the new principle at about Rupees 4 each. One coolie now works with ease all the punkahs (25 in number) on one side of a Barrack 353 feet long; and were it required that double the number should be so worked, it would be only necessary to add a weight at the other end of the "pedal" as shown in the sketch, which is so fixed that on each descent of the "pedal" it is drawn in towards the fulcrum, losing by the change of position its own weight and adding to the power of the lever. The action is reversed by the descent of the other pedal.

The pendulous lever punkahs have one uniform swing of from 6 to 8 feet, and are pulled with equal force backward as well as forward, and can be worked either by a coolie or machinery. The number of punkahs that can be so worked is limited only by the strength of the beams from which they are suspended, or their capability of resisting the vibration that might be caused by the improved swing of the punkah. It is calculated that all the punkahs in a Barrack of ordinary size can be worked by one coolie with ease.

Where one or two Barracks are in line, the whole of their punkahs may be pulled by attaching the ends of the wires to a vertical shaft, and motion given to it by a coolie pressing against the end of a lever, fixed on the principle of the bar of the capstan or of the common "Chuckee" or "Soorkee Mill;" by a simple contrivance the punkahs could be made to perform a swing every time the coolie lifts his foot, or 20 or 30 swings while he would be making a complete revolution.

I am quite confident as to these results, for when it is considered that a power equal to 20 lbs. laid on one of the pedals pulls the whole line of punkahs now working in No. 2 Barrack, when the contrivance is imperfectly and roughly constructed, and while pivots, &c., which should be fixed in brass sockets, are only roughly embedded in wood, it must be admitted that a much greater power can be applied (and consequently a far greater number of punkahs can be pulled,) by a coolie who, while having the powerful aid of the lever, would only have to use a gentle pressure, and walk in an easy pace around the circle that a revolution of the lever would describe.

It is also necessary to add, owing to the permanent nature of the punkahs, no annual renewal of ropes is necessary, and the wire being made of one length, no inconvenience would result in the event of one being broken, as it could be replaced in a few minutes.

It is calculated that the brass sockets in which the pivots work will not be worn out by friction in five years; but it should be necessary after that period to renew them, it can be done at a maximum cost of 3 annas per punkah.

BENARES,
The 4th October 1861.

G. W. GRANT,
Supervisor, D. P. W., N. W. P.

Extract of a letter from Captain A. G. PRIESTLEY, Executive Engineer, Benares Division D. P. W., to Major H. DRUMMOND, Superintending Engineer, 2nd Circle, N. W. P., No. 127, dated 19th August 1861.

"I have the honor to acknowledge the receipt of your Memorandum No. 161 A, dated 3rd August 1861, with enclosures.

"As reply I shall give a description of Supervisor Grant's method of hanging and pulling punkahs, which is so infinitely superior to any other yet proposed, that I consider further experiment with Colonel Hogge's machines, time and money thrown away. I speak with the greater confidence as I am well acquainted with them, and, before I left the Gwalior Division had taken steps to try a modification of them in the Morar Barracks, they being one of the best things of the sort I had then come across.

"You will, I think, remember that, although I approved of Supervisor Grant's method of 'hanging' punkahs, I had little hope of his 'Pulling Machine.' Modifications which he has since introduced in it have much simplified and improved it, rendering it when applied to punkahs swung on his principle, by far the best aid yet invented.

"The punkahs are those ordinarily used in Barracks, a frame 6 feet long by 2 feet wide, covered with cloth, and having a fringe attached. They are hung by an iron rod firmly fixed to the frame, and working on a pivot attached to the beam supporting the punkahs. The extremity of this rod is not at the pivot, but it is continued above it for about 1½ feet (vide Drawing).

"The usual ropes are given as checks. The punkahs are connected by iron wire fastened to these rods at two points, one, the upper extremity of the rod, *above* the pivot, and the other at the same distance from and below the pivot. The wires of the end punkahs are not led directly to the machine, but are first fastened to a rod working in a slit of the wall so much for the hanging; now comes the pulling apparatus.

"From the extremities of the rod (or lever) in the wall, wires are carried, connecting each end with the vertical arm of a bent lever (see Drawings). The horizontal and longer arms of these levers are weighted more or less to constitute a counterpoise to the *weight* of the number of punkahs to be pulled.

"These longer (horizontal) arms are connected with treadles which the coolies work by their weight. That is the whole Pulling Machine.

"I have here to notice a simple and ingenious arrangement by which the power of the decending treadle is increased and the ascending one lightened. A movable weight is connected with the produced extremity of each, which flying out when it commences its ascent, returns towards the fulcrum, when it begins decending, thus giving a considerable increase of power to the man working it.

"I draw attention to the following points:—

"I.—The Pulling Machine takes up little or no room, and can be put up in the verandah of a Barrack, so that no space is sacrificed to it. It is not easily put out of order.

"II.—One coolie is quite sufficient to work it, and supposing at the outside four reliefs, four coolies would thus pull all the punkahs of a Barrack.

"The experimental one pulls with the greatest ease 25 punkahs, 6+2 feet (the entire number on one *side*, not end, of a building 353 feet long); 12 coolies are employed to pull by hand the corresponding punkahs on the opposite *side* of the same building.

"III.—The connecting wires show no sign of straining; they have never snapped, and they work noiselessly.

"IV.—There is no "Bengal" side to a punkah, the pull being alternately in either direction.

"V.—It economises labour by enabling a man to use his weight.

"I am not able to say what the cost of each machine (capable of moving all the punkahs in any building) may be. Supervisor Grant informs me it is about Rupees 30, and the hanging of the punkahs can be modified to his plan for about Rupees 4 each; when the punkahs are put up new, they will not cost more than those in present use.

"The motion is so far from languid, that the men in the Barrack where the experiment is being carried on, seize every opportunity of shifting their beds from the opposite side of the Barrack, so as to get them under these punkahs.

"No strain is exerted on the truss tie beams, to which they (the punkahs) are attached.

"I should be glad if a Committee of Departmental Officers were assembled, who might record a professional opinion on this method; I have reason to believe that the Military Authorities highly approve of it.

"It is perhaps superfluous to say that the success of this plan is in the application of the motive power. Any machine would be likely to succeed with punkahs so hung and moved."

Proceedings of a special Committee convened by order of Major General G. Campbell Commanding the Benares Division, by Benares, Station Order dated 1st October 1861, for the purpose of reporting on the Punkah pulling and Tattie watering inventions of Mr. Grant, Department Public Works.

PRESIDENT.

Officiating Deputy Inspector General of Hospitals, J. A. DUNBAR, M. D.

MEMBERS.

Major E. CHIPPINDULL, H. M.'s 19th Regiment.
Captain A. G. PRIESTLEY, Executive Engineer.

Captain C. Nedham Deputy Assistant Quarter Master General attended the Committee and furnished the returns.

1. The Committee assembled on the 4th October 1861, at 6 ½ A. M., at No. 2 Barrack, where the experimental working of Mr. Grant's inventions has been carried on during the past season. Mr. Grant was present to explain the construction of his machinery.

2. The Committee beg to observe that these experiments are under trial by the order and at the expense of Government. The Committee had the principles of the machinery for pulling punkahs explained to them by Mr. Grant, and then inspected its actual working. The punkahs are similar in shape to those generally used in Barracks and appear to be very securely fastened. The wires by which these in question are pulled, are of the kind employed by the Electric Telegraph Department, they are therefore very tough and neither liable to brea knor to rust; the punkahs swing without noise, and very easily, describing a larger are than those in common use, inasmuch as the motive power is double and so applied as to prevent the recoil being merely the reaction of the weight of the punkah. The machinery is strong and simple so that it will seldom require repair, and should it do so, the repairs can be readily effected. Six men are sufficient to work the machine in a Barrack irrespective of the number of punkahs hung in it. Annexed is a document showing the comparative cost of the present and proposed systems as regards the Barrack and Hospitals at this station. The saving effected would be greater were the buildings of larger size as is the case in most Cantonments. The Committee considering the great advantages offered by Mr. Grant's invention in increased efficiency and greatly diminished expense are unanimous in their approval of it, and strongly recommend its adoption.

3. The Committee now proceeded to examine into the merits of Mr. Grant's Tattie Watering machine, a model of the trough accompanies the report, it will be seen to be very simple and at the same time a highly efficient contrivance, for it distributes the water equally over the whole breadth of the tattie and can be made of sizes suitable to the tatties required. The tattie also is greatly improved, being constructed without twine, which rots and causes unpleasant effluvia, and the khus-khus is laid transversedly as well as longitudinally thus impeding the two rapid descent of the water and thereby allowing the evaporation of a much larger quantity of it. A comparison of the actual cost of this method and that commonly in use is appended.

4. The Committee consider the invention very useful and efficient, and recommend its adoption in all Barracks at Stations where tatties are used.

5. Appended are Mr. Grant's explanation and diagrams of his machinery.

(Signed) J. DUNBAR, M. D., *Officiating Deputy Inspector General of Hospitals, President.*

(,,) C. CHIPPINDULL, Major, H. M.'s 19th Regt. } *Members.*
(,,) A. G. PRIESTLEY, Captain, *Executive Engr.* }

(,,) C. NEDHAM, Captain, *Deputy Assistant Quarter Master General, attending the Committee.*

(,,) G. CAMPBELL, Major General, *Commanding Benares Division.*

(True Copy.)

(,,) T. MOSS, *Assistant Secretary to Government, North West Provinces, in the P. W. D.*

Comparative Statement of the present cost of Punkah pulling Establishment and of that of Mr. Grant's Machine.

Present scale of expenditure.

Number of Barrack, Seerole.	Number of men occupying.	Number of Punkahs.	Number of Coolies.	Rate of pay.	Total pay for 5½ months.	Remarks.
				RS.	RS.	
No. 1	180	106	48	4	1,056	
No. 2	84	50	24	4	528	
No. 6	90	64	30	4	660	
No. 1 Hospital ...	...	34	12	4	268	
Total of present expenditure for the above four buildings.					2,512	

Scale of expenditure of Mr. Grant's invention for first year including machines and alteration of Punkahs.

Number of Barracks.	Number of men occupying.	Number of Punkahs.	Cost of alteration of Punkahs at 4 Rupees each.	Cost of Machine.	Number of Coolies at 4 Rupees each.	Cost of Coolies for 5½ months.	Total expenditure the first year.	Remarks.
			RS.	RS.	RS.	RS.	RS.	
No. 1	180	106	424	25	6	132	581	
No. 2	84	50	200	25	6	132	357	
No. 6	90	64	256	25	6	132	413	
Hospital	...	34	136	25	6	132	293	
Total expenditure for the four buildings....							1,644	

The expenditure for the same four buildings in subsequent years would be the cost of Coolies only, viz., six for each Barrack, Rupees 132, per Barrack.

ABSTRACT.

	RS.		RS.
Present expenditure as above, for four buildings......	2,512	Present expenditure......	2,512
Expenditure for Mr. Grant's plan for first year (inclusive of alterations). .	1,644	Expenditure on Mr. Grant's plan in following years 132 Rupees per Barrack for four Barracks........ ...	528
Saving in the four buildings....	528	Saving in the four buildings....... ...	1,984

NOTE.—Repairs are not taken into account as the wear and tear in Mr. Grant's plan cannot exceed the present expenditure in renewal of ropes, which is avoided in his invention.

(Signed) C. NEDHAM, Captain,
Deputy Asst. Qr. Mr. Gel, Benares Division.

(True Copy.)

(Signed) T. MOSS,
Assistant Secretary to Government of North Western Provinces in the D. P. W.

No. 424. ORDER THEREON, 21st May 1862, No. 1,102.

1. Ordered that copies of the foregoing letter and its accompaniments be forwarded to the Acting Deputy Chief Engineer, Central Circle, with reference to his letter, No. 10,268, dated 6th February 1862, and to the Deputy Chief Engineers Northern and Southern Circles, for information.

2. Ordered also that 30 copies of the foregoing papers be furnished to the Chief Engineer, for circulation to the various District Engineers.

3. With respect to the remark contained in the last paragraph of the notes on the sketch, the Governor in Council is of opinion that there must be some mistake as to one man doing the work of four in the same time, and he considers that this part of the scheme requires further explanation on the part of the inventor.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 425. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th April 1862, No. 109:—

SIR,

1. On receiving through the Agent the accompanying copy of a letter* addressed by the Chief Engineer to the Secretary of the Irrigation Company in London and forwarded, as I concluded, for information and such observations as might appear to be called for, I represented† to the Chief Engineer with reference to his proposals to cross the river Pennár near Cuddapah by an Anicut, that it would probably be well to consider whether an Aqueduct would not be a preferable work, as exception might be taken to the water of the Pennár being drawn off *there* by the Company, unless they were prepared to take up the whole of the existing irrigation in the Nellore District, and that it would be desirable to avoid as much as possible any works which would be likely to lead to a misunderstanding. Also that possibly an Aqueduct might prove the more desirable work, inasmuch as it would afford a passage across the river and yield a remunerative toll.

* No. 1, dated 1st January 1862.

† Letter No. 24, dated 3rd March, 1862.

2. In reply to this suggestion the Chief Engineer has addressed me the accompanying letter,‡ requesting that the opinion of Government may be given on the vital question which he considers is involved in the first of my reasons, which he is of opinion opposes the principle that all land is possessed of a right to the water of its own valley, a principle recognized, he states, in the case of the Máuri Reservoir on the Huggri, where the Mysore and Bellary lands would be the first to receive the water, while the privation thereby of water to the Kistna Delta was never questioned.

‡ Dated 10th March 1862, No. 6.

3. He further quotes the following case of recent occurrence, which he considers remarkably supports his views. Lately, certain Natives requested permission from the Collector of Cuddapah to take off a channel from the Pennár at the same spot where the Company's Anicut is proposed. The Collector referred to the Irrigation Company's Engineers to know, whether the proposition would interfere with the Company's works, as in the event of its not doing so, the Collector and District Engineer both approved the proposal. Hence, the Chief Engineer argues, there can be no objection to the Company doing what the Natives would have been allowed to carry out.

4. He further adds, that the original scheme generally approved, was to use the Kundár and Pennár as the Main Channel of the Company's scheme: but with a view to improve the navigation, he has deviated in part from this, carrying the navigation in artificial channels, and using the rivers to carry the main supply.

5. He concludes with observing, that if it is decided on constructing an Aqueduct, arrangements must be made for conveying a greater supply in the channels above, and if the same principle extends up the valley of the Kundár, the whole scheme from the river would have to be changed. The cost of conveying the water by an Aqueduct would, moreover, he states, be much greater.

6. Before discussing the arguments laid down by the Chief Engineer, I would first mention, that my suggestion was not made with reference to any abstract principle, but to existing rights, and to previous instructions§ of Government directing that when plans and estimates for the Anicut and Channels (across the Pennár) proposed by the Irrigation Company were prepared, care was to be taken that the Government Anicut at Nellore and works connected therewith were secured from risk of injury.

§ Dated 14th May 1860, No. 997, and 8th June 1860, No. 1,196.

7. It appears to me that it is not so much the correctness of the abstract principle laid down by the Chief Engineer as the recognition of priority of long established rights that has to be considered.

8. The discussions which arose regarding the Máuri tank, are rather against than for the view of the Chief Engineer, inasmuch as this Government objected to the construction of that work by the Mysore authorities unless a guarantee were given that *existing* interests in the Bellary District should not suffer injury thereby.

9. Injury to the Kistna Delta was certainly not brought forward; because none would be inflicted on it, seeing that the Huggri does not furnish any of the summer supply, the only time when the interests of the Delta would be interfered with, and it was because the Irrigation Company undertook to prevent *existing* interests both in Mysore and Bellary from injury, that the execution of the Máuri tank by them would have been permitted.

10. The case of the Pennár seems to me to be somewhat similar. Water is proposed to be diverted from it for the irrigation of certain lands in the Cuddapah District, through which it runs. Of the right of these lands to take water from the Pennár, there can be no question I believe, but whether that right could be exercised at the expense of *present irrigated* lands lower down in Nellore, is certainly questionable, *quite* irrespective of the parties who desire to use the water, whether they be the Natives alluded to in Colonel Cotton's letter, or the Irrigation Company.

11. While there is a superabundance of water at certain times in the Pennár, there could not be any possible objection to its being used, but, it is during the period when the supply is short, insufficient even for the irrigation already dependent thereon, that objections would naturally be taken to have that supply at all diminished; and it was with the object of avoiding all possible causes of dispute, which notwithstanding precautions to the contrary will probably arise, that I recommended an investigation of the alternative mode of crossing the Pennár at Cuddapah.

12. In doing so, however, I by no means intended to convey that it is not *possible* to guard existing rights from being infringed by the adoption of an Anicut instead of an Aqueduct, for, means will have to be taken with that view at the Anicut at Someswaram and during the period when the supply in the river is insufficient for the Nellore works, only so much must be allowed to enter the Company's Canal there as is discharged either over their last Weir in the Kundár, in the event of their discharging the surplus by the river, or over the last Calingulah in the Cuddapah District, should it be conveyed by an Aqueduct, and therefore in the event of that work not being constructed, similar measures would have to be taken at the Cuddapah Anicut.

13. To avoid the appearance of inconsistency in objecting to that Anicut, while one is to be constructed 50 miles lower down at Someswaram, I would mention that the head of the Canal from the latter work will be *within* the Nellore District, that the water admitted into it will command all the *present* irrigation, and therefore that arrangements can be made with the Company for supplying the Government works to the extent which they

have hitherto enjoyed, while the local Revenue and Engineer Officers could exercise such supervision as might be necessary to see that *existing* interests did not suffer. If water is drawn off at Cuddapah, the Officers of that District would have no particular inducement for seeing that the interests of Nellore did not suffer.

14. The adoption of the Aqueduct will not, as stated by the Chief Engineer, necessitate an alteration in the whole arrangement of the Canals above, inasmuch as it will only be requisite to provide water sufficient for the extent of land commanded in Cuddapah, and which will be necessarily limited, although the Chief Engineer provides for carrying water sufficient for 2,50,000 acres. The remaining quantity can pass down the river itself to Someswaram as originally contemplated. The Aqueduct will thus be a work of only moderate size. As regards the level of the country approaching the Pennár, it is not, I conclude, absolutely necessary to adhere to the line chosen for the approach to the Anicut; but on this point I cannot speak certainly, as no plans have yet been submitted, indeed my only object was to have the merits of both projects thoroughly considered with a view to the selection of that which would best serve the interests of all concerned.

15. I still think that this should be done, and that the investigation should be made on the supposition that the Aqueduct is to be carried out, so that the best line for crossing the river by such a work may be selected, and the cost of the two schemes be fairly calculated.

16. The Company would lose the advantage of the occasional freshes in the Pennár for the irrigation of lands in Cuddaph; but they would still have the benefit of them for lands in Nellore, and if the same advantages can be secured, whithout the construction of works which might probably be a source of disputes, it appears to me that it would be to the interests of the Company to avoid all such as might possibly lead them into constant litigations, especially if they can be carried out at no very disproportionate expense.

17. I do not here ask for a decision as to which of the two schemes should be undertaken, as I think that should depend upon their respective merits, but only submit for the consideration of Government the expediency of both plans being thoroughly investigated and estimated for.

No. 426. ORDER THEREON, 21st May 1862, No. 1,103.

1. The question discussed in the above letter appears to the Governor in Council simple in principle though requiring attention to details in carrying it into practice.

2. The community at the outlet of a river cannot of course claim that the whole of the water of such river should be reserved for their sole use to the exclusion of the right of those higher up the stream to benefit by the water as it passes them; neither again can those residing on the banks higher up be permitted to divert the water to the injury of those lower down; but the Government see no objection to the construction of an Anicut at the proposed site opposite Cuddapah across the Pennár, and to utilizing its *flood* waters provided, of course, that, during the dry season, a certain quantity of water bearing a fair proportion to the ordinary summer discharge is allowed to pass down the river for use in the Nellore District. This quantity should be carefully determined in communication with the local Officers, and the means of passing it down should be provided by the Company's Engineers.

3. Before, however, permission can be given to carry out the above work the Consulting Engineer will decide, in communication with the District Engineer Nellore, the precautionary measures requisite to secure the interests of that District; and it must be clearly provided that the summer water of the Pennár must be retained as heretofore for the use of Nellore, and that the Government reserve their right to such portions of the flood water as they may require. To this end precise and formal stipulations must be laid down, and the right of the Government Officers to take measures from time to time to cause the requisite supply to be furnished must be acknowledged in a written agreement drawn out in a form to be approved by Government and signed by the Chief Engineer and Agent of the Company.

4. When the Government are in possession of this document permission will be given to commence the construction of the Anicuts on the Pennár.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 427. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 3rd May 1862, No. 104:—

SIR,

1 Letter from the District Engineer Presidency, No. 1,279, dated 1st April 1862.
1 Plan.
1 Estimate.
1 Specification.

1. I have the honor to forward a plan and estimate amounting to Rupees 1,070, for dismantling and rebuilding the bridge between General Tulloch's and Mr. Arathoon's gardens at Nungumbaukum within the limits of the Presidency District.

2. Its insecure state was first brought to notice last year by Messrs. Parry & Co., and the 1st Assistant District Engineer, then in charge of the Presidency District Engineer's Office, asked whether he was at liberty to repair the same, expressing at the same time his doubts as to the bridge being Government property as the road over it only leads to one house that which was occupied by Colonel Simpson.

3. The question was put to the Barrack Master, who stated that bridges on public roads were not under his control. The matter was then referred to the Collector of Madras who has not as yet replied to the requisition.

4. As further delay might perhaps be the cause of serious accidents, and as the District Engineer reports that the bridge in question might fall at any moment if not promptly attended to, I beg to recommend that the plan and estimate submitted by him may receive the early sanction of Government for its execution from the Reserve Fund of 1862-63.

5. The estimate has been examined and corrected. It will be observed that it is proposed to replace the present 30 feet arch by two of 13 feet 9 inches span as being more economical and feasible without delay. The water way will be curtailed a little but not of any consequence.

No. 428. ORDER THEREON, 21st May 1862, No. 1,104.

Before passing orders on this application the Government will await the receipt of the reply of the Collector of Madras to the reference made to him by the Acting Deputy Chief Engineer, Central Circle, it being doubtful whether the bridge in question is one that should be kept in repair at the public expense.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 429. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th May 1862, No. 411:—

SIR,

1 Letter from the District Engineer South Canara, No. 225, dated 26th March 1862.
1 Do. No. 94, dated 26th August 1861.
1 Estimate.
* No. 4,211, 5th August 1861.

1. The Collector of South Canara having in a report to the Revenue Board, No. 117, 23rd July 1861, noticed the bad condition of the lower part of the Munzerabad Ghát, which was considered in some places even dangerous; the Board observed in their Proceedings, as per margin,* that the line of road when in good order is very easy for wheeled traffic and that it would be greatly to be regretted if for want of repairs the large sums which had been expended on its construction should be rendered comparatively useless. These Proceedings of the Board were communicated to the District Engineer with instructions to report on the Ghát and prepare an estimate for what was wanted.

2. On the 26th August 1861, the District Engineer reported that the bad condition of the road could not be attributed to want of repair but from the rock not having been blasted away sufficiently originally. The District Engineer subsequently examined the road and, under date

26th March, submitted a report on it, prepared by Lieutenant Smalley, 2nd Assistant District Engineer, together with an estimate amounting to Rupees 6,550 for effecting certain improvements. The proposed improvements consist chiefly of widening the road in places where it is narrow, by blasting away rock; Rupees 4,904 of the whole estimate being on this account only; a further improvement is, cutting down the brows of hills and ridges and with the excavated material forming embankments at their bases which will reduce the gradients considerably. The estimate amounting to Rupees 6,550 has been examined, and the calculations are correct. One Rupee a cubic yard for blasting stone is however excessively high, and I have addressed the Acting District Engineer regarding it.

3. In paragraph 5 of his letter the District Engineer comments on the condition of four timber bridges, which though in sufficiently good order at present are not substantial enough to stand much traffic, and which he proposes should be rebuilt of masonry. I have instructed him to prepare plans and estimates for substantial structures.

4. I beg to suggest that the amount of the enclosed estimate may be sanctioned from the Reserve Fund of the current year.

No. 430. ORDER THEREON, 21st May 1862, No. 1,105.

The estimate, amounting to Rupees 6,550, submitted with the above letter is sanctioned, and a grant of Rupees 3,000 is made from the Reserve Fund of this year towards carrying it into effect. Should more be required before the end of the working season an application for a further grant should be made to Government. The Deputy Chief Engineer, Central Circle, will report the result of his reference to the District Engineer as respects the rate for blasting rock.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 431. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India, (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 8th April 1862, No. 9:—

SIR,

1. Your Letter, No. 84, of 31st December last, and its accompaniments, containing proposals for remodelling your Department of Public Works, have been laid before me, and have engaged my attention in Council.

2. Your Government appear to be unanimously of opinion that very material changes are required in the Department. The Chief Engineer has not hitherto possessed those facilities for communicating with the Government which are desirable to enable him satisfactorily to conduct the business of his office; the superintendence exercised by the Deputy Chief Engineers over the District Engineers has been very defective, and the District Engineers, while having an amount of executive labour to perform sufficient to afford them full occupation, have been compelled to devote to the details of office work a large portion of time, which could ill be spared from employment in the field. Still more serious detriment has resulted from the transfer to the Public Works Department of the village roads and tanks, which were formerly under the care of the Collectors, for it is now generally admitted that the irrigation works, more especially, on which the prosperity of all interests connected with the land so mainly depends, are no longer in nearly so efficient a condition as when it was the duty of the Revenue Authorities to keep them in repair, with the aid which the cultivating classes were always ready to afford for a purpose in which they were themselves so deeply interested.

3. From a careful examination of the various remedies suggested for the evils thus arising, it appears to me that good grounds have been shown for reverting, in a great measure, to the practice which prevailed previously to 1855. Past experience would seem to be opposed to the expectation of the satisfactory working of any system which would leave the maintenance of even the minor works wholly dependent on the pleasure or exertions of the ryots, while, on the other hand, under the supervision and guidance of the Revenue Officers, their hearty co-opera-

tion in an object of such unquestioned advantage to themselves may be fully depended on. In the Godavery and Kistnah Deltas no change is requisite. Little advantage could result from withdrawing the peculiar and extensive, but still immature, system of irrigation which is there being formed from the immediate charge of the scientific department by which it has been created. Everywhere else, however, it is, on many accounts, desirable that powers similar to those formerly possessed by them should again be vested in the Revenue Authorities. A suitable establishment of trained subordinates and of "Maramut Maistress" should again be placed at the disposal of the Collector, and the principal Executive Officer of the District, although still acting under and responsible to the Superintending Engineer of his circle, in operations relating to works of magnitude or importance, should be bound to give the Collector his professional advice and assistance, whenever required, with respect to secondary tanks, channels, and communications.

4. This would involve a change in the position of the District Engineer, whose duties, so far as his proceedings in his own proper department were concerned, would become principally of an executive character. It would, therefore, be necessary that his operations should be subject to the inspection of a superior of professional experience, and, instead of dispensing, as has been suggested, with the Superintending, or, as they are designated at Madras, the Deputy Chief Engineers, it might even be advisable to increase their number to four, in order that, being resident in their circles, they might be better able to exercise an efficient superintendence.

5. To carry out the above views, the present classification of the Engineer Establishment must be somewhat modified. At its head will be the Chief Engineer, who, as you inform me, you have decided shall, in future, occupy also the position of Secretary to Government in the Public Works Department. This arrangement will no doubt be attended with the same advantages at Madras as those which some time since led to its adoption at the other Presidencies.

6. The second grade will consist of three or four Superintending Engineers, each having under him a circle embracing a third or a fourth part of the whole number of districts into which the Madras territories are divided, each directing, superintending, and personally inspecting all public works within his own circle, and each being responsible, in the first instance, for the efficient construction of new works, and for the efficient maintenance of other works.

7. Executive Engineers, of whom one will be allotted to each district, will constitute the third class. These will be subordinate to the Superintending Engineers, and, in the Godavery and Kistnah Districts, will be under the exclusive control of those officers, and in the other districts they will perform their executive duties connected with the principal works, such as trunk roads, bridges, &c., under the direction of the Superintending Engineers; but it will be an essential part of their duty to attend to the requisitions of the Collectors, and to aid them in designing works of irrigation, and in supervising the execution and repair of all works and buildings under their charge.

8. A fourth class will consist of Assistant Engineers, who will be distributed among the several districts in proportion to their respective requirements.

9. Under the proposed arrangements, there will be a considerable reduction in both the executive and in the clerical work to be performed by the Public Works Department, and it is satisfactory to observe that corresponding reductions in the office establishment of the Engineers of every grade are already under consideration. A diminution in the cost of establishment is not however, the chief advantage to be expected from the proposed change. If the legitimate influence of the Collectors be properly exerted, the ryots will soon, no doubt, be as ready as ever to co-operate with the Revenue Officers for objects of so much importance to themselves, and minor irrigation works will be more carefully watched, more promptly repaired, and more effectually maintained, than it would be possible for them to be by any other agency.

10. There are, however, two most important points which, though dwelt upon at some length in some of the earlier papers attached to the letter under reply, seem not to have been kept sufficiently in view in your more recent deliberations.

11. In a Minute, dated 10th May 1860, Mr. Maltby alludes to "the opportunity given "under the present system to the subordinates to make over-charges in the repair of tunnels, "tanks, and embankments, as being the main cause which has brought the Department into so "much public obloquy. The enhanced prices," he adds, "charged for materials and labour in "the bills for these petty repairs are naturally carried upwards to more important works. The "body of the Department thus becomes tainted, and hence those lamentable disclosures which "fill the public records of the last two years, and confirm the unfavourable verdict passed "on the Department by public opinion. The cases in which the Government has had to dismiss "servants for fraud and record displeasure are too numerous for detail on this occasion, but "the real rottenness of the present system may be seen in the exposure of the Department in "North Arcot by the Commission for investigating Public Establishments. There is no reason "to suppose that this was an isolated case, or that the Department was worse in that district "than others. Similar cause for distrust has, indeed, been discovered in other places also. "Thus, in Tanjore, our most important province, where there are the largest establishment and "annual outlay, Government have had to record a belief that there is systematic fraud in the "Department. In another large district (Bellary) Government found 'indications of culpable "laxity in the system of accounts and employment of the funds,' and, when dismissing some "servants for fraud in Madura, Government remarked that the subordinates of the Department "kept there accounts 'very incorrectly;' that they were improperly allowed to draw and hold "large sums of money, and that but little vigilance had been exercised over them. In Trichi-"nopoly, also, the inefficient condition of the Department caused Government a 'very painful "feeling.'"

12. Charges like these, emanating from such a quarter, cannot have been made on light grounds, and call for the adoption of very stringent measures. The remedy required, however, is, as was observed by Lord Stanley in September 1858, when commenting on a similar state of things in the North-West Provinces of Bengal, not so much improved organization "as a rigorous enforcement of existing regulations." "The best and most skilfully devised system can be of "no use if its regulations are suffered to remain a dead letter. Neglect of rule then becomes "the rule, and inattention to duty derives an appearance of sanction from established precedent "and general practice." . . . .

"The Chief Engineer, who is directly accountable to you for the state of the Department, "should be held regularly and strictly to account. He would than be compelled to exercise "corresponding watchfulness over Superintending Engineers, and they, in turn, over Executive "Engineers, and several gradations of office would then become, what they were intended to be, "a series of really effective checks, instead of serving, as at present, merely as a blind, and "tending to prolong the time during which delinquency may remain unperceived."

13. Again, in a Minute by Mr. Morehead, dated 16th June 1860, allusion is made to the "absence of efficient check and control." The District Engineers, it is said, are everywhere "so "occupied in keeping accounts and in preparing the bills for works executed, that they have "become almost exclusively a department of accounts, leaving the supervision of the execu-"tion of the works, especially works of repair, to the lower subordinates of the Department."

14. The multiplicity and complexity of the accounts here referred to, are matters of general complaint. They prevent Executive Officers from attending properly to the most important of their duties, while, as has been shown by Mr. Maltby, they present no obstacle to gross fraud and peculation on the part of subordinates in the Department. A system of account and audit equally strict, but of a more simple and intelligible character than the one at present in use, is evidently one of the essentials to a really efficacious and complete reform of the Department, and I am anxious that your immediate attention should be given to the best means of introducing such a system.

15. Having thus given you my general views on this highly important question, I have only to urge on you my desire that they may be carried out in detail by your Government with the utmost despatch possible, as it is obviously desirable for the public interests that the admitted

evils of the Department of Public Works, as at present constituted, should no longer be allowed to continue, and that the advantages anticipated by the alteration now directed should be speedily realized.

No. 432. ORDER THEREON, 21st May 1862, No. 1,106.

1. In accordance with the instructions conveyed in the above Despatch from the Right Honorable the Secretary of State, His Excellency the Governor in Council resolves to call upon the Board of Revenue to furnish as early as practicable information on the following points, with a view to giving effect to the change of system now ordered.

2. The Board will observe that except in the Godavery and Kistna Districts, it is considered desirable, in paragraph 3 of the Despatch, that "powers similar to those formerly possessed should again be vested in the Revenue authorities." These powers embraced the execution of every description of work (Military excepted) in the Presidency, but an apparent limit has now been assigned by the expression "secondary Tanks, Channels and Communications." Again in paragraph 7, it is apparently contemplated that the Executive Engineers of Districts are to carry out work to Trunk Roads, Bridges, &c., while *all* works of irrigation and buildings are assumed to be placed under charge of the Collectors.

3. It will be necessary therefore for the Board to state :—

(1.) The exact extent and description of works to be placed under the Revenue Officers, and to define the class of "Tanks, Channels and Communications" which they consider to be represented by the term "secondary."

(2.) To submit Tabular Statements showing the number and salaries both of the Executive Agency which will be required to carry out the works so undertaken and also of the Conservancy Establishments necessary to watch the irrigation works and regulate the distribution of water to the lands.

(3.) To explain the method in which they propose to keep the accounts locally, and that on which those accounts are to be rendered to the Office of Audit for Public Works.

4. On receipt of the above particulars the Chief Engineer will be instructed to modify the present Public Works Establishment; so as to suit the change of system, and to transfer to the Revenue authorities such portion of the present Subordinate Agency as they may state to be absolutely required.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 433. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 30th April 1862, No. 13,082 :—

SIR,

1. In accordance with the instructions contained in Extract Minutes Consultation, dated 10th August 1857, No. 1,109, I have the honor to submit for the orders of Government the accompanying papers relating to the case of P. Thungavaloo Mudali, a Clerk in the Central Office, who lately passed through the Court for the relief of Insolvent Debtors, and obtained the benefit of the Act without opposition from his creditors.

1 Schedule.
1 Balance sheet.
1 Judgment of Court.

2. The Schedule comprises 18 items, amounting in the aggregate to Rupees 1,702-11-10, the chief portion of which is on account of sums borrowed at different periods by Thungavaloo's father on their joint bonds, as will be seen from the following analysis :—

	RS.	A.	P.		
Balance of principal due on bonds signed by Thungavaloo and his father for money borrowed and received by the latter	1,401	3	5	Items	12
Do. do. by Thungavaloo for money borrowed and received by him	40	0	0	,,	1
Balance of interest due on principal borrowed by Thungavaloo's father	164	0	0	,,	1
Renewed bond	80	0	0	,,	1
Articles purchased	17	8	5	,,	3
Total	1,702	11	10		

3. Two-thirds of these debts were contracted in 1860 and 1861, and from the balance sheet filed in the Court by the Insolvent, I find that from March 1861 to February 1862, one-fourth* of his income was set apart towards their liquidation.

* Receipts ... Rs. 560
Cash paid in part liquidation of debt ... ,, 139½

4. The cause of his Insolvency, Thungavaloo states, to have been the sudden death of his father (who was a Pensioner, and who had for some time previously been labouring under difficulties), and his inability, in consequence of the large family left dependent upon him for support, to set apart from his small salary of Rupees 30 per mensem a larger sum than he had done for the payment of the debts contracted by his father.

5. Considering, therefore, that there are no instances of extravagance on the part of Thungavaloo personally, and that the Court have granted to him without reservation the full benefit of the Act, I recommend that he be permitted to resume his duties in the Central Office, and that authority be given for the payment of his salary in arrears from the 19th March 1862, the date of his suspension from office under the provision of the Orders of Government, dated 28th October 1859, No. 2,539.

No. 434. ORDER THEREON, 21st May 1862, No. 1,107.

Under the circumstances stated, and agreeably to the recommendation of the Chief Engineer, the Government permit P. Thungavaloo Mudali, lately passed through the Insolvent Court, to resume his duties in the Central Office, Department Public Works, but decline to authorize the payment to him of his salary in arrears which will be drawn and disbursed to the party who performed his duty during his absence.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 435. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 24th April 1862, No. 114 :—

SIR,

1. I have the honor to forward, for the sanction of Government, the accompanying Account Current of cash receipts and disbursements received from the Agent for the Quarter ending 31st December 1861, together with its several vouchers.

2. The expenditure by *cash* and adjustment during the quarter is Rupees 1,93,244 and 31,785-2-2 respectively, amounting in aggregate to Rupees 2,25,029-2-2, which is debited to the following heads :—

	Cash.			Adjustment.			Total.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Agency	5,683	0	0	620	0	0	6,303	0	0
Engineering	39,627	2	10	50	0	0	39,677	2	10
Store charges	9,508	9	7	8	0	0	9,516	9	7
Do. received from England	180	4	0	0	0	0	180	4	0
Stores purchased	9,542	3	8	0	0	0	9,542	3	8
Manufacture of stores	4,718	2	7	0	0	0	4,718	2	7
Medical expenses	1,057	9	1	85	0	0	1,142	9	1
Steamer " Thistle"	4,815	1	6	800	0	0	5,615	1	6
Construction	1,18,111	14	9	30,222	2	2	1,48,334	0	11
Total ..	1,93,244	0	0	31,785	2	2	2,25,029	2	2

3. The detailed statements showing the particulars of the sums under each head have been duly audited and checked in my Office, explanation being obtained for all doubtful entries.

4. The points requiring notice are as follows.

5. The cash balance on the Divisions on the 30th September 1861, which was by mistake included under " inefficient balance" in the accounts of the previous quarter, as explained in paragraph 8 of my letter dated 8th February 1862, No. 77, is adjusted in the present Account Current and amounts to Rupees 47,044-11-0. From the abstract appended to the Account Current it will be observed that a sum of Rupees 32,561-3-1 under " inefficient balance" had also been adjusted to the debit of other heads, both the above sums amount in aggregate to Rupees 79,605-14-1, which being deducted from the amount left to be accounted for under " inefficient balance" on the 30th of September 1861 reduces the amount still remaining to be adjusted out of the old advances to Rupees 60,931-5-6. The greater portion of this sum, the Agent states, was the expenditure incurred on the Kurnool Anicut, and will be adjusted in his Account Current for June 1862.

	Account Current.			Progress Report.		
	RS.	A.	P.	RS.	A.	P.
July 1861	150	15	2	0	0	0
August do.	6,235	0	8	8,985	6	9
Sept. do.	23,836	2	4	39,254	6	3
October do.	35,302	13	10	56,493	6	1
Nov. do.	34,300	6	10	56,461	5	4
Dec. do.	48,508	10	0	76,261	15	5
Total..	1,48,334	0	11	2,37,456	4	10

6. Under the head " construction" Rupees 1,48,334-0-11 are charged in the Account Current, this sum is below by Rupees 89,122-3-11,* the amount entered in the Progress Reports. The difference arises from the fact of the value of work done in each month being entered in the Progress Reports at the rates for which it is contracted, while the sums charged in the Account Current are only such as were actually paid in cash on that account. There ought not, however, to be any difference between the Accounts Current and Progress Reports, as the latter should form vouchers to the former. The Agent has already been addressed on the subject, and a method of preserving consistency between the two documents referred to has been suggested, which when carried out will prevent a recurrence of the difference above pointed out.

No. 436. ORDER THEREON, 21st May 1862, No. 1,108.

On the assurance of the Consulting Engineer, that the detailed Statements have been duly audited in his Office, the accounts of the Company for the fourth or last Quarter of 1861 submitted with this letter, are passed ; the aggregate expenditure being Rupees 2,25,029-2-2, viz., 1,93,244 by cash and Rupees 31,785-2-2 by adjustment.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 437. Read the following Endorsement of the Consulting Engineer for Irrigation and Canal Company, dated Chepauk, 2nd May 1862, No. 3.

Read the following letter from F. AGNEW, Esq., Agent Madras Irrigation and Canal Company, to Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer, Madras Irrigation and Canal Company, dated Madras, 1st May 1862, No. 141:—

SIR,

The Board of Directors are anxious to obtain copies of all Official Reports and Orders of Government relating to Public Works, Revenue, &c., which may contain information of a useful character bearing upon, or relating in any way to Irrigation works, I have therefore the honor to request that your will obtain the sanction of Government to all such documents being placed at my disposal for transmission to the Board.

Submitted for the favorable consideration of Government.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
Consulting Engineer I. and C. Company.

No. 438. ORDER THEREON, 21st May 1862, No. 1,109.

The Agent to the Irrigation Company will be informed that all such papers as have been published for general information are purchasable either at the Booksellers in Madras or at the Government Press Office. Should there be any particular work on which information is wanted the Government will have no objection to it being furnished, but the present application of the Agent is of too general a character to admit of the Government complying therewith.

(Signed) W. H. HORSLEY, Lieutenant.-Colonel,
Secretary to Government.

No. 439. Read the following letter from Lieutenant-Colonel T. McGOUN, Controller Military Finance, to Colonel H. MARSHALL, Secretary to Government, Military Department, dated Fort Saint George, 12th May 1862, C:—

SIR,

With reference to paragraph 5 of the Order of Government in the Public Works Department, No. 971, dated 7th May 1862, I have the honor to state that no Engineer Bills are now in the Military Audit Office; none have been received since July 1861, in which month six Bills of the Superintending Engineer Presidency Division were passed and sent to the Accountant General 3rd and 31st July.

Transferred to the Department of Public Works, with reference to the Order in that Department, 7th May 1862, No. 971.

Fort Saint George,
14th May 1862.

(Signed) R. HAMILTON, Lieut.-Colonel,
Deputy Secretary to Government.

No. 440. ORDER THEREON, 21st May 1862, No. 1,110.

Communicated to the Accountant General and to the Officer in charge of the Audit and Account Departments of the Central Office, with reference to Mr. Lushington's letter, No. 346, dated 19th March 1862, reviewed in Proceedings of Government, No. 971, dated 7th May. The latter Officer will report what has become of the Bills referred to in the 2nd paragraph of Mr. Lushington's letter and which it would seem were stated by Major Rawlins to have been sent to the Controller of Military Finance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 441. Read the following letter from Colonel Commandant H. B. TURNER, Acting Secretary to Government of Bombay, Public Works Department, to Lieutenant-Colonel W. H. HORSLEY, Secretary to the Government of Madras, dated Bombay Castle, 5th May 1862, No. 2,548 :—

SIR,

I am directed to acquaint you, for the information of the Government of Madras, that the Acting Superintending Engineer, Southern Circle, has reported that, in his opinion, the Brick-making and Tile-turning machines which were supplied by the Madras Government to the Public works Department in North Canara, and which are referred to in the accompaniment to my letter No. 2,265, dated 22nd ultimo, are of no use there, and that they have consequently been made over by the Executive Engineer, North Canara, to the Agent who has been deputed from Madras to receive charge of the machinery at Beitkál.

No. 442. ORDER THEREON, 21st May 1862, No. 1,111.

1. Communicated to the Chief Engineer for information.

2. Ordered that the following letter be despatched to the Government of Bombay :—

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 443. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Department, Public Works, Fort Saint George, to the Acting Secretary to the Government of Bombay, D. P. W., dated 21st May 1862, No. 1,112.

SIR,

1. With reference to your letter No. 2,548, dated 5th May 1862, I am desired by the Honorable the Governor in Council to state that this Government is not aware of any Agent having been "deputed from Madras to receive charge of the machinery at Beitkál."

2. Intimation has already been given to your Government in my letter No. 975, dated 7th instant, that an opportunity of bringing back to Madras the machinery lying at Beitkál is not likely to occur for some months to come, owing to the south-west monsoon, and I am desired again to request that the Bombay Government will be good enough to issue instructions to its Officers in North Canara to take due care of the Brick making and Tile turning machines, as well as of the other machinery, until an opportunity offers for their removal to this Presidency.

3. I am directed to add that, in the opinion of the Government, it would have been better if the whole of the machinery in North Canara at the time of the transfer had been taken over by the Bombay Public Works Department.

4. It was sent round at considerable expense to the State, expressly for use in that District, and its re-shipment to Madras after the south-west monsoon will be attended with further outlay besides the risk of injury.

No. 444. Read the following letter from F. LUSHINGTON, Esq., Acting Accountant General, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government Public Works Department, dated Fort Saint George, 12th May 1862, No. 15:—

SIR,

1. With reference to the Order of Government No. 1,968, dated 20th September 1860, Public Works Department, and in continuation of my letter No. 295, dated 24th January last

I have the honor to forward herewith a Statement showing the sums disbursed at this Presidency, on account of the Madras Irrigation and Canal Company from 1st January to 30th April 1862, amounting to Rupees 5,08,983, which added to the payments* made on that account, from 1st October 1859 to 31st December 1861, make an aggregate of Rupees 18,34,560-10-8.

* Rupees 13,25,577-10-8.

2. I beg to point out that the Statement now sent embraces the transactions of four months, or one month (viz., April 1862) in excess of a Quarter, the period for which these Statements were hitherto furnished. This has been done for the purpose of effecting a change in the Quarter, from the Calendar to the Official year, so as to assimilate it in this respect with other Quarterly Statements in this Office.

Statement showing the sums disbursed at this Presidency on account of Madras Irrigation and Canal Company from January to April 1862, in continuation of the Statement for the Quarter ended 31st December 1861, submitted with the letter from the Accountant General to Government, dated 24th January 1862, No. 295.

Particulars.	Capital account.			Revenue account.			Total.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Payments from January to April 1862.									
General Treasury, Fort Saint George.									
Paid to Mr. F. Agnew, Agent of the Madras Irrigation and Canal Company, as an advance for Salaries and Contingencies for November 1861............	21,361	0	0						
Paid to do. as do. for do. for January 1862..............................	21,359	0	0						
Paid to do. as do. for do. for February 1862..............................	21,359	0	0						
Bank of Madras.									
Paid to do. as do. for do. for March 1862..............................	22,067	0	0						
Paid to do. as do. for do. for April 1862..............................	23,692	0	0						
General Treasury.									
Paid to do. as do. for the 1st section 17½ miles Main Canal from Sunkasala to Kurnool..........................	97,250	0	0						
Paid to do. as do. for the 2nd and 3rd portions of the first section of the Main Canal..........................	2,00,000	0	0						
Paid to do. as do. for the completion of Offices and Stores at Bowanassy	1,895	0	0						
Paid to do. as do. for the Aqueduct over the Hindri at Kurnool	1,00,000	0	0						
Total payments from January to April 1862..............................	5,08,983	0	0	0	0	0	5,08,983	0	0
Memorandum.									
Payments from January to April 1862 as above..............................	5,08,983	0	0						
Payments from 1st October 1859, the commencement up to 31st December 1861..............................	13,25,577	10	8						
Grand Total of payments up to 30th April 1862..............................	18,34,560	10	8						

Fort Saint George,
Accountant General's Office,
12th May 1862.

(Signed) F. LUSHINGTON,
Acting Accountant General.

No. 445. ORDER THEREON, 22nd May 1862, No. 1,113.

Ordered that the Statement received with the foregoing letter be communicated to the Consulting Engineer for the Irrigation and Canal Company and to the Secretary of State for India.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 446. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Department Public Works, Fort Saint George, to the Under-Secretary of State for India, dated 22nd May 1862, No. 1,114.

SIR,

1. In continuation of my letter No. 1, dated 10th February 1862, I am directed by the Governor in Council to forward copy of a Statement furnished by the Acting Accountant General, showing the sums disbursed here on account of the Madras Irrigation and Canal Company from 1st January to 30th April 1862. The aggregate amount disbursed up to 30th April 1862 is Rupees 18,34,560-10-8.

2. The Statement above referred to contains the transactions of four months, or one month (viz., April 1862) in excess of a Quarter, the period for which these Statements were hitherto submitted. This has been done for the purpose of changing the Quarter from the Calendar to the Official year, so as to assimilate it in this respect with other Quarterly Statements issued out of the Accountant General's Office.

(Signed) W. H. HORSLEY, Lieutenant-Colonel,
Secretary to Government.

No. 447. Read the following Proceedings of the Madras Government in the Military Department, dated 30th April 1862, No. 1,561 :—

Communicating letter from the Government of India regarding Mr. Grant's Watering Troughs and Punka pulling Apparatus, and stating that application will be made for information as to the result of the improvements in the North Western Provinces and Punjaub where they have been extensively introduced. } (Vide Military Proceedings, 30th April 1862, Nos. 605 @ 607.)

No. 448. ORDER THEREON, 22nd May 1862, No. 1,115.

Communicated to the Chief Engineer and Deputy Chief Engineers Northern, Southern, and Central Circles, with reference to Proceedings of Government, No. 1,102, dated 21st May 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 449. Read the following letter from Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, Fort Saint George, dated Chepauk, 19th April 1862, No. 12,860.

SIR,

1. With reference to the Order of Government, No. 1,178, dated 26th June 1861, I have the honor to submit the accompanying letters from the District Engineer of Tanjore, reporting on the result of the working of the carts and bullocks, originally purchased on account of the Sea Custom House at Negapatam.

No. 318, dated 1st March 1862.
„ 167, „ 7th October 1861.
„ 166, „ 7th do.

2. Captain Oakes reports that "the experiment has not proved successful, but it has been tried under disadvantageous circumstances." It was not found practicable to use the carts exclusively on a single work, and this necessitated their being sent from one Range to another when the bullocks suffered consequently in their treatment, and there was a loss of time and hire.

3. The carts were mostly employed on Road No. 39, and were charged to that work at 12 Annas each, the rate prevailing in that vicinity.

4. As the bricks from the kiln on the Vellayar were brought down by boats, carts were not required in the construction of the Sea Custom House at Negapatam, added to which they could not have been profitably worked, as the rates had fallen to 9½ or 10 Annas per diem, in consequence of the opening of the Railway.

5. Captain Oakes, however, is of opinion that had there been an opportunity for using all the carts on any extensive work, a large saving would have been effected, and he still advocates the necessity of leaving a few carts at the disposal of his Department on the same grounds, viz., (1st), that in cases of emergency it could be independent of extraneous aid, and (2nd), that more work is actually performed by public, than by hired carts. But as the carts are now divided, and little or no saving is effected thereby, he recommends the sale of the bullocks and bandies at the close of the present working season.

6. Annexed is a statement exhibiting the outlay and return up to the 31st December last, in which is included interest at 5 per cent. on the capital. In the former is included an expenditure of Rupees 164-14-8, which the District Engineer was obliged to incur for the protection and maintenance of the carts and bullocks.

	RS.	A.	P.
Constructing a shed	20	3	5
Purchasing a baggage tent	12	0	0
Repairs of carts in excess of previous quarter	21	10	8
Excess in pay of drivers, &c.	28	6	3
Do. in price of cotton seed, gram, &c.	82	10	6
	164	14	8

7. The Bills for the stock value of the carts and bullocks and the subsequent expenditure thereon have not been passed by this Office, because these amounts are not worked off as expenditure, but stand separately debited under the head "Carts" and will be adjusted on the disposal of the same, should such a course be authorized.

8. I have now to solicit the orders of Government as to the eventual disposal of the carts.

Statement showing the outlay and return on the Government Carts and Bullocks, from December 1860 to December 1861.

	RS.	A.	P.	RS.	A.	P.
Expense of purchase of 20 carts with Bullocks, of their transit from Salem, and of their fitting up, &c., ...				2,767	9	11
Interest on the above for 12 months @ 5 per cent... ...				138	6	1
Expense of feed of bullocks, pay of cart men, repairs to carts, &c.						
1860, December.	157	5	6			
1861, January	132	2	8			
,, February... ...	216	14	6			
,, March... ..	272	12	3			
,, April...... ...	237	1	7			
,, May...	261	2	6			
,, June	252	5	9			
,, July...	322	7	10			
,, August... ...	320	1	0			
,, September ..	265	1	2			
,, October... ...	355	3	2			
,, November ...	338	0	0			
,, December ...	313	14	1			
1862, January on account of December 1861	99	15	11			
	3,514	7	11			
Deduct balance paid on account of the price of bullocks...	10	0	0			
				3,531	7	11
				6,440	7	11
Deduct stock value of carts and bullocks......				2,767	9	11
				3,672	14	0
Value of work performed by carts				3,642	3	11
Loss...				30	10	1

Value of work performed by the carts and bullocks.	RS.	A.	P.	RS.	A.	P.
1860, December...	115	2	0			
1861, January ...	198	10	0			
,, February ...	204	8	0			
,, March ...	305	4	0			
,, April... ...	347	4	0			
,, May	280	8	0			
,, June	258	0	0			
,, July	344	13	0 (1)			
,, August ...	325	7	0 (2)			
,, September. .	300	0	0			
,, October ...	363	12	0			
,, November...	332	10	0			
,, December...	364	14	0			
				3,740	12	0
Value of materials on hand ...				11	7	11
				3,752	3	11
Deduct value of 3 bullocks that died				110	0	0
				3,642	3	11
Expense of maintenance... ...				3,534	7	11
Saving...				107	12	0

(1.) In this sum is included Rupees 1-5-0, realized by sale of bullock litter.
(2.) Do do. ,, 1-3-0, realized by do. do.

Note.—Excluding the charge of interest on the capital there appears a saving of Rupees 107-12-0, but inclusive of that charge the result is a loss of Rupees 30-10-1.

Central Office of Public Works,
Chepauk, 19th April 1862.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 450. ORDER THEREON, 22nd May 1862, No. 1,116.

* Proceedings No. 1,491.

From Deputy Chief Engineer, Central Circle, 10th June 1861, No. 1,419.

1. On the 11th July 1860* the Government sanctioned the disbursement of 4,000 Rupees for the purchase of 30 carts and 30 pairs of bullocks, to be worked on account of Government in the District of Tanjore, the proposal having been made by the District Engineer in the first instance in connection with the repair of the Sea Custom House at Negapatam. They were afterwards informed that difficulty had been experienced in obtaining these carts and bullocks, and that 20 carts only with bullocks were ultimately procured from Salem. By the time these bullocks and carts

arrived, the materials for building the Sea Custom House had been brought down by boat to Negapatam, so that the carts had to be sent into different parts of the Range for employment. As no hire could be charged while the carts were proceeding to the various works, the transaction did not turn out a profitable one; but as Captain Oakes and Colonel Birdwood were of opinion that the experiment had not been fairly tested, the Government sanctioned a further trial of three months.

Proceedings 26th June 1861, No. 1,178.

2. It is now reported that the experiment having been tried under disadvantageous circumstances, has not proved successful. Captain Oakes is yet disposed to retain a few of the carts, but as it appears to be impossible to work them at a profit while they are divided over the Range, he recommends that they may be sold. From the statement attached to Colonel Birdwood's letter, it appears that the 20 carts and bullocks were purchased for Rupees 2,767-9-11, but adding interest on the outlay at 5 per cent., and cost of maintenance, the debit side of the account shows a charge against Government of Rupees 6,440-7-11; but deducting the stock value of the bullocks and carts, the debit is reduced to Rupees 3,672-3-11. The value of the work performed on the other hand shows a net credit of Rupees 3,642-3-11, which results in a loss of Rupees 30; but not taking the interest charged into account, there is a saving of Rupees 107-12-0.

3. It is clear from the foregoing that the experiment is not likely to prove a successful one, and as each day passes the bullocks and carts will deteriorate in value while their maintenance will have to be provided for, the Government therefore direct that the bullocks and carts be at once sold to the best advantage and that the proceeds realized by the sale be reported for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Read the following letters :—

No. 451. From Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government Public Works Department, dated Chepauk, 11th April 1862, No. 12,573.

SIR,

1. I have the honor to submit for the information of [1] Government a letter from the Chief Engineer in Mysore, in which he states that he has addressed the Commissioner of Mysore on the subject of the Perambady and Sampajee Ghâts, and has declined to take charge of the latter on the maintenance allowance of 100 Rupees a mile which he is satisfied is inadequate.

1 Letter from the Chief Engineer Mysore, No. 3,993, dated 29th March 1862.

2. Under this circumstance, and as the District Engineer of South Canara has declared that he considers the allowance ample, it would appear advisable that the Sampajee Ghât should, as heretofore, remain in charge of the Madras Department Public Works, and the Government will perhaps consider it advisable that the Perambady Ghât should remain so too, as there is not much reason in transferring one to the charge of Mysore and not the other.

From Colonel E. LAWFORD, Chief Engineer in Mysore, to Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, Public Works Department, Madras, dated Bangalore, 29th March 1862, No. 3,993.

SIR,

With reference to Colonel Birdwood's letter, No. 11,940, dated 26th instant, I have the honor to inform you that I have addressed the Commissioner of Mysore on the subject of the Perambady and Sampajee Ghâts, and have declined to take charge of the latter with a maintenance allowance of 100 Rupees a mile, which I am satisfied is inadequate.

No. 452. From C. B. SAUNDERS, Esq., Officiating Commissioner for the affairs of Coorg, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, Fort Saint George, dated Bangalore, 16th April 1862, No. 4:—

SIR,

No 529, dated 22nd March 1862.

1. I have the honor to acknowledge the receipt of your letter marginally noted and to request you to submit to His Excellency in Council the following observations for his favorable consideration.

2. From a perusal of the enclosure which accompanied your letter, it would appear that a sum of Rupees 150 was originally proposed for the maintenance, per mile, of the roads across both the Perambady and Sampajee Ghâts in Coorg, but that Rupees 100 only has been sanctioned for the Sampajee Ghât road, whilst His Excellency in Council has been pleased to grant an allowance of Rupees 150 for the Perambady Ghât.

3. The character of the country through which the two roads in question run, being almost, if not altogether identical, and the traffic on both being very nearly equal, it will on a re-consideration of the subject be apparent, that the one which is least cared for will soon fall into disrepair, and will ultimately require a large outlay to restore it to that condition in which it might have continued uninterruptedly had the increased allowance not been withdrawn. The Chief Engineer in Mysore even goes so far as to beg, that the charge of the road may be withdrawn from him, if he is left to do the work at the reduced rate, as he has no fixed establishment in Coorg, and the cost of labor is daily becoming more enhanced.

4. Under these circumstances I beg that the Governor in Council will be pleased to give the subject his most favorable consideration, and to increase the grant for the maintenance of the Sampajee Ghât from Rupees 100 to Rupees 150 per mile.

No. 453. ORDER THEREON, 22nd May 1862, No. 1,117.

1. Adverting to the Orders of Government of the 22nd March last, No. 528, sanctioning the increased allowance of 150 Rupees a mile for the maintenance of the Perambady Ghât and road, but declining to raise the authorized allowance of 100 Rupees a mile for the Sampajee line, the Deputy Chief Engineer of the Centre Circle reports the refusal of the Chief Engineer of Mysore to take over charge of the portion of the latter pass and road, within the Province of Coorg, on the allowance of 100 Rupees a mile, as he believes it to be inadequate; this portion, as well as the portion of the Perambady Ghât lying within Coorg, having been ordered in Proceedings 29th October 1861, No. 1,997, to be transferred to the Mysore authorities. The Officiating Commissioner of Mysore and Coorg, on the other hand, represents that the character of the country through which both roads run is almost identical, that the traffic is very nearly the same, and that the one which is less cared for will soon fall into disrepair, and perhaps require a large outlay afterwards to restore it to that condition in which it might have been maintained with the increased allowance asked for. He therefore requests a re-consideration of the subject, in view to the maintenance allowance of the Coorg portion of the Sampajee line being also raised from 100 to 150 Rupees a mile.

2. Under such circumstances, the Government sanction an increased allowance of 150 Rupees a mile for the portion of the Sampajee Ghât and road within the limits of the Province of Coorg; and as the full sum of 5,887 Rupees has been provided for this purpose in the Budget of 1862-63 at the rate of 150 Rupees per mile, the Governor in Council authorizes that amount being made available to the Chief Engineer of Mysore for the 39¼ miles of the Sampajee line lying to the eastward of the frontier of South Canara. The Sampajee and Perambady Ghâts and portions of road within Coorg leading to them will, in pursuance of former orders, be at once made over to Mysore; the portion of the allowances to be allotted to the Public Works Department of that Government, at the increased rates, being 5,887 and 5,100 Rupees respectively. In modification therefore of paragraph 4 of the Order of Government, dated 22nd March 1862,

No. 528, it is observed that the correct amounts of the maintenance allowances for the Perambady and Sampajee Ghâts in 1862-63 are 10,200 Rupees and 12,487 Rupees respectively, assignable in the portions shown below:—

		RS.	
Perambady Ghât.	In Coorg, 34 miles at 150 Rupees...	5,100	Mysore.
	In Malabar, 34 miles at 150 Rupees..........	5,100	Malabar.
	Total...	10,200	
Sampajee Ghât.	In Coorg, 39¼ miles at 150 Rupees............	5,887	Mysore.
	In South Canara, 66 miles at 100 Rupees......	6,600	South Canara.
	Total...	12,487	

The Budget provides for only 3,400 Rupees for the portion of the Perambady Ghât in Malabar, while the Government have already in their Proceedings of the 22nd March last, granted sanction for raising the allowance of that Ghât from 100 to 150 Rupees on the whole 68 miles, the difference between 3,400 Rupees and 5,100 Rupees (the amount required for Malabar), viz., Rupees 1,700, will be met out of the Reserve Fund of the current year. This order cancels that conveyed in paragraph 4 of the Proceedings of the 22nd March quoted above.

3. As it is inconvenient, however, thus to assign funds out of the Budget of the Madras Presidency for works lying beyond its frontier, the Governor in Council, on a re-consideration of the subject, is of opinion that it will be better in future for the Mysore Government to provide its own funds for the maintenance of the Sampajee and Perambady Ghâts lying within the limits of Coorg. No provision, therefore, for these portions will hereafter be made in the Budget of this Presidency; and the Government now resolve to make the necessary communication to the Commissioner of Mysore and Coorg to the above effect.

	RS.
* For Sampajee Ghât..................	5,887
For Perambady do	5,100
Total...	10,987

4. The Acting Accountant General will be so good as to arrange for the transfer of the above-mentioned sums to the Commissioner of Mysore, and to the District Engineer Malabar, viz., Rupees 10,987* to the former and Rupees 1,700 to the latter.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 454. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, Fort Saint George, to the Commissioner for the Government of the Territories of His Highness the Rajah of Mysore, dated 22nd May 1862, No. 1,118.

SIR,

1. I am directed by the Governor in Council to acknowledge the receipt of your letter dated 16th April 1862, No. 4, and in reply to furnish you with a copy of the Proceedings of this Government of this date, from which you will observe that they have resolved to raise the maintenance allowance of the portion of the Sampajee line, lying within the limits of Coorg, from 100 to 150 Rupees, as in the case of the Perambady Ghât; and that the full sum of 5,887 Rupees (being at the rate of 150 Rupees a mile for 39¼ miles) has accordingly been ordered to be held at your disposal for the Sampajee line in 1862-63.

Dated 22nd May 1862, No. 1,117.

2. As it is found inconvenient for this Government to set aside funds out of their Public Works Budget for works lying beyond the frontier of this Presidency, His Excelency the Governor in Council, on a re-consideration of the subject, is of opinion that it will be the best plan for the Mysore Government to make provision in its own Budget for the maintenance of the Perambady and Sampajee Ghâts and portion of road lying within the limits of Coorg after the termination of the current official year; and he has accordingly directed that no provision be made for these works in the Madras Budget hreafter. I am to request that the Mysore Government will be pleased to instruct its Public Works Department accordingly.

No. 455. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Secretary to Government, Public Works Department, dated Chepauk, 6th December 1861, No. 8,084 :—

SIR,

Nos. 768, 1,170, 17, dated 14th May, 14th July and 24th October 1860.
1 Letter from the Collector, No. 169, dated 24th September 1861.
1 Section, 3-8,488, 1861.
1 Do. 4 do.
1 Plan 2 do.
1 Specification.
1 Abstract estimate.
1 Letter from District Engineer, No. 860, dated 17th September 1861.

1. Agreeably to the Orders of Government conveyed in Proceedings Madras Government marginally noted, I have the honor to forward the accompanying plans and estimates amounting in the aggregate to Rupees (27,600) twenty-seven thousand and six hundred for converting the Fortifications round the rock at Trichinopoly into a Circular road and for laying out the ground on both sides of the road in building allotments, as follows :—

		RS.
Taking down the wall with the old stone...	...	17,766
Gravelling for the road...	...	2,250
Removing prickly pear..	...	1,850
Three Public Latrines on the standard plan...	...	3,840
Extra charge, blasting rock, drainage, tunnels, &c.	...	1,894
Total...		27,600

No. 860, dated 17th September 1861.

2. With reference to paragraph 7 the District Engineer reports that a portion of the wall marked H L in the plan has been already thrown down by the Convicts, and he proposes to begin forming his line of road-way from a point adjoining the Main Guard Gate, to the Trunk Road near the site of the old Barracks.

3. The earth from the Fortification will suffice to fill in about one-half of the ditch only, not so much in some places, and the strip of land available for building allotments will be small, after deducting the space required for the breadth of road-way.

4. As regards paragraph 8 of Proceedings of Government No. 768, dated 14th May 1860, the District Engineer states, that the stones are used by the Department Public Works as soon as taken down, that the surplus will be small, and a trifling sum only gained by their sale.

5. The proceeds of the sale of the land, Captain Palmer states, will be also small for the reason given in paragraph 3, but as the price of land varies very considerably he cannot now form a correct opinion of the sum that might be realized on that account.

6. The removal of the prickly pear, which has quite overgrown the ditch in places, the District Engineer states, " is urgently called for," as the ditch is most offensive at all times, and one of the dirtiest places imaginable ; in a sanitary point of view, therefore, it should be one of the first things attended to.

7. The portion near the new jail and adjoining the Commissariat Lines, marked as available for Bazars, and which the District Engineer considers would yield a large sum should be sold as soon as the ground is laid out.

8. The accompanying estimates which have been examined in this Office and the necessary corrections made therein, have been approved of by the Collector, I have therefore to solicit sanction for the execution of the work, the funds for the same to be advanced from local sources, and repaid from the proceeds of the sales of land, &c , as directed in paragraph 6 of the Proceedings of Government last quoted.

No. 456. ORDER THEREON, 22nd May 1862, No. 1,119.

1. The estimate of 27,600 Rupees submitted with this letter is sent up in pursuance of Orders of Government, dated 14th May 1860, No. 768, and provides for dismantling the walls of the Fortifications encircling the rock and old town of Trichinopoly, converting the site into a broad Boulevard or Circular road, laying out the ground on either side in building allotments and constructing three Latrines for the use of the public. As a set off against this expense, it is not

expected that much will be gained from the debris of the old walls, nor from the grounds either, as most of the latter will be taken up for the broad road, with the exception of a portion reserved for bazars (paragraph 7), from the sale of which the District Engineer expects to realize a large sum, but how much it is not stated.

* Proceedings 14th May 1860, No. 768.

2. The removal of the Fortifications and the improvement of the site were considered* necessary by Government for the health of the town, they therefore accept the estimate now submitted, which they observe has been approved by the Collector; but before granting sanction for its execution, they would wish to be informed what local funds there are available for the work, and what prospect there is of replacing any advance from that source by the sale proceeds of the building allotments, &c. The proposed work though a very desirable one on sanitary grounds, is purely a muncipal improvement, and as such should be paid for from local funds, and not out of the general revenues.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 457. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 16th April 1862, No. 270/Gm 94.

Read the following letter from Captain C. G. PHILIPPS, Officiating District Engineer of Ganjam, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer dated Berhampore, 7th April 1862, No. 423:—

SIR,

1. In Part II of the District Budget submitted by Captain Harington, I find an item amounting to Rupees 2,280 entered as necessary in the ensuing official year, for maintaining the newly constructed portion of Trunk Road from Dendagedda to Casseboogah, being Rupees 80 per mile for 28½ miles. This item has been struck out at Madras, and as the road will be entirely finished, with the exceptionof three bridges not yet sanctioned, within this month, I am compelled to solicit the above grant from the Reserve Fund, as without it the only partially consolidated road will be destroyed. Much of it has been formed and metalled since the last monsoon, and great inequalities of surface after heavy rain, and with much traffic on it, are only to be expected.

2. The cost of the road has been Rupees 32,172, or Rupees 1,129 per mile. It was commenced on the 1st of April 1861, on the principle inculcated by Mr. Bourdillon, viz. "cheap roads, to be improved afterwards as traffic is developed by liberal annual maintenance allowance."

3. I calculate that the road will require 200 cubic yards of metalling per mile annually, which at 5 Annas per cubic yard, amounts to Rupees 62-8, leaving Rupees 17-8 to be expended in clearing jungle at the sides, in turfing, sectioning, tools, and petty improvements. In a year or two, when the road is opened and bridged, throughout from Chicacole to the Bengal frontier this allowance will not be sufficient.

4. I trust sanction may be accorded, and intimation given at an early date.

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1 Letter from the District Engineer Ganjam, No. 423, dated 7th April 1862.

Item, Nos. 110 and 111 of Budget 1862-63.

The accompanying letter No. 423, dated 7th April 1862, from the Acting District Engineer Ganjam, is submitted to Government with a strong recommendation that the grant solicited for maintaining 28½ miles of trunk road No. VI, between Casseboogah and Dendagedda in Ganjam, amounting to Rupees 2,280 may receive sanction, and that the amount required for the ensuing year may be allotted out of the Reserve Fund. The road in question appears to have been constructed under a sanction accorded by Government on the 24th August 1857, No. 1,628; the estimated amount being Rupees 46,550.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 458. ORDER THEREON, 22nd May 1862, No. 1,120.

1. As the newly made road between Casseeboogah and Dendagedda (portion of Trunk Road No. 6) in Ganjam, which has just been completed, under an estimate of 46,550 Rupees,* will most likely suffer in condition and perhaps necessitate a large outlay hereafter for its repair if not maintained, the Government sanction Rupees 2,280 from the Reserve Fund as a maintenance allowance in the current year.

* No. 110, Budget of 1862-63.

2. The Officiating District Engineer states that the road is completed with the exception of three bridges not yet sanctioned. The Government presume that he refers to the three bridges for which an estimate of 17,740 Rupees was sanctioned in their Proceedings dated 31st March 1862, No. 625.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 459. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 16th May 1862, No. 651 :—

SIR,

1 Letter from the Acting District Engineer, South Canara, No. 239, dated 9th April 1862.
1 Plan.
1 Estimate.

1. In obedience to the Orders of Government No. 34, dated 25th March 1852, calling for submission of the estimate for the Dam proposed to be constructed at Mangalore in South Canara, to close the mouth of the Gurpur river, I have the honor to enclose an Estimate amounting to Rupees 6,300, for the consideration of Government.

2. I would at the same time remark that, looking to the peculiar character of the project, I should prefer that sanction should be delayed until advantage can be taken of the presence at Mangalore of Lieutenant-Colonel Walker, who has had more experience of the Harbours of the Western Coast than any Officer of the Department, and to whom I should wish to remit the entire scheme for consideration and report before any action is taken upon it.

3. No ill whatever can result from delay as the monsoon has by this time set in on the Western Coast, precluding all executive operations for four months.

No. 460. ORDER THEREON, 23rd May 1862, No. 1,121.

The Government approve of the Acting Deputy Chief Engineer's suggestion in paragraph 2, and direct that it be carried out. The result of the reference to Lieutenant-Colonel Walker should be reported for the information of Government.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 461. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 16th May 1862, No. 663 :—

SIR,

* Dated 12th May 1862.
† No. 465, dated 3rd April 1862, to O. C. Mysore.

1. With reference to Order of Government No. 1,014,* I have the honor to remark that Captain Mayne must have penned the letter quoted therein† under a misapprehension as to the precise amount allotted for expenditure during 1862-63 on the new Dragoon Barracks at Bangalore, which is Rupees 75,000, and not Rupees 70,000 as represented by that Officer.

2. I have addressed the Acting Executive Engineer at Bangalore, this day, to the effect that every effort must be made to render the new Barracks fit for the reception of the Regiment destined to occupy them, as soon as possible; and should the progress made with the unfinished buildings warrant the measure hereafter, doubtless Government would be prepared to make a further allotment out of the Reserve Fund to expedite their completion.

No. 462. ORDER THEREON, 23rd May 1862, No. 1,122.

Communicated to the Military Department, with reference to the Order in that Department, dated 14th April 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 463. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 9th May 1862, No. 6:—

SIR,

With the accompanying letters* the Agent forwards for sanction an Indent for medicines, value estimated at Rupees 2,500, prepared by Dr. Ratton, the Medical Officer at Kurnool, and stated to be required as soon as they can be procured from England. The supplies sanctioned† under Indents, in July 1860, to the amount of Rupees 5,513-12-2, the Agent states, have all been received and distributed.

* Dated 3rd November 1861, No. 503.
,, 6th February 1862, No. 21.
,, 3rd May 1862, No. 143.
,, 7th ,, ,, ,, 151.

† Vide Proceedings of Government, dated 21st July 1860, No. 1,561.

No. 464. ORDER THEREON, 23rd May 1862, No. 1,123.

The Government sanction the Indent submitted with this letter for medicines to be procured from England and valued at Rupees 2,500, required for the several Divisions of the Irrigation Company's operations.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 465. Read the following Proceedings of the Madras Government in the Public Department, dated 28th February 1862, No. 272:—

Requesting that orders may be passed for remedying in some degree the local disadvantages to which the General Hospital is subject, and returning plans and estimates for certain works to the same. } (Vide Public Proceedings, 28th February 1862, Nos. 164-165.)

No. 466. ORDER THEREON, 23rd May 1862, No. 1,124.

1. Resolved that the plans and estimate submitted with Colonel Birdwood's letter of the 27th June 1861, No. 2,051, amounting to 2,19,500 Rupees, be forwarded for the sanction of the Government of India, and that the foregoing Proceedings be in the meantime communicated to the Deputy Chief Engineer, Central Circle, for his information and guidance.

2. It is observed that the abovementioned estimate provides for the work referred to by the Principal Inspector General Medical Department in the last clause of paragraph 4 of his letter No. 27, dated 10th February 1862, and that on an application from Colonel Carpendale, the Government in their Proceedings dated 20th March last, No. 503, sanctioned his proposal to lay out the balance of the money which would have been expended in completing the new

wing as far as possible, had not the building of it been for the present suspended, in levelling the ground, forming new roads, and demolishing and removing old buildings, &c., on the under-standing that the 15,000 Rupees provided for that purpose in the Budget of 1862-63 shall be reserved for the completion of the new wing.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 467. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, Fort Saint George, to the Secretary to the Government of India, dated 23rd May 1862, No. 1,125.

SIR,

1. With Mr. Chief Secretary Pycroft's letter dated 5th October 1859, No. 2,375, this Government submitted plans and estimates, and the entire correspondence on the subject of various improvements to the General Hospital at Madras, which, originating with His Excellency Sir Charles Trevelyan, had been fully discussed by a Committee composed of the then Deputy Chief Engineer of the Northern Circle, and the principal Medical Officers at the Presidency. The plan as then submitted involved an estimated outlay of 2,75,000 Rupees, and was made up of six parts each complete in itself, as follows :—

I.	Temporary buildings for the accommodation of the sick.........	3,100
II.	Additional ward in the lower story...................................	66,500
III.	An upper story over all..	1,22,900
IV.	Conversion of present Medical College into quarters for the Medical Officer of the European Regiment........................	3,000
V.	Quarters for the Medical Officer and Subordinates attached to the General Hospital..	44,500
VI.	Medical College and Dissecting rooms	35,000
	Total......	2,75,000

2. It is unnecessary to explain in this place how these proposed improvements were intended to remove the inconveniences of bad ventilation, bad drainage, and overcrowding, and to introduce many important improvements, the necessity of which is universally acknowledged by all who have paid attention to the subject of Hospitals, as the whole correspondence on the subject is already before the Government of India: suffice it to state that this Government applied for, and obtained the sanction of the Supreme* Government, to the two first items of the general scheme, viz., Rupees 3,100 + Rupees 66,500, leaving the remaining sections of the plan for after consideration. The conditions under which the proposals of this Government were approved were, that the sanctioned outlay was to be subject to the limitation of Public Works expenditure for the year, and that the final project for the whole of the contemplated additions was, when matured, to be submitted again for the consideration of the Secretary of State. Since that date, however, the Budget Rules have undergone considerable modification; and under paragraph 16 of the new Rules furnished with Lieutenant-Colonel Yule's letter of the 27th July 1861, No. 68, the entire project falls quite within the competence of the Supreme Government.

* From Government of India, 12th December 1859, No. 8,362.

3. It may also be mentioned in this place, that the Government of India suggested for consideration, with reference to the presumed capacity of the enlarged plan to give cover for about 700 patients, and the imprudence of collecting so many sick persons in one building in a

tropical climate, whether it would not be better to provide a separate building for the women and children and a portion of the male patients; and whether, if any additions to the present building were necessary, it might not be made with greater advantage, in regard to architectural effect, by placing an upper story to the present building, than by adding to its length. These objections were replied to in the letter of this Government, dated 4th April 1860, No. 711, wherein they conveyed the answer of the abovementioned Committee, in which this Government expressed their concurrence, that the enlarged plan of the hospital, inclusive of the new wing and upper story, was calculated to accommodate 576 and not 700 patients, and that as there would be 100 superficial feet of space and 1,500 cubic feet of air for each patient, with free and independent ventilation for each separate portion, there could be no objection to locate the former number in one building. It was also explained that the addition both of the wing and the upper story was indispensably necessary to carry out the contemplated plan of improvement, and to provide the amount of accommodation required.

1 Estimate.
1 Specification.
3 Plans.

4. As the new wing is now far advanced towards completion, it is time to re-submit the entire project for the consideration and final sanction of the Government of India. I am directed accordingly to forward the accompanying plans and estimate, which have now undergone careful revision and scrutiny, amounting, inclusive of the outlay already authorized, to Rupees 2,19,500 as shown below:—

	RS.	RS.
New Wing.		
Ground floor	59,731	
Upper story	42,235	1,01,966
Old Portion.		
Alterations, &c., to ground floor	38,550	
New upper story	41,511	1,10,061
Compound wall and gate	2,339	
Leveling ground, turfing and forming new road	2,400	
Cooly hire for demolishing old buildings	2,734	
Total	2,19,500	

It will thus be seen that provision is made for an additional wing with upper story over the entire range, and for draining and laying out the surrounding grounds. Provision is also made for detached upper storied buildings at the angles of the wings on the north side for baths and latrines connected by means of a covered passage, as well as for improving the present Hospital. The improved building, as contemplated by the Committee, is calculated to accommodate 576 patients, both Military and Civil, male and female. The present plans do not provide for parts IV, V, and VI of the original scheme submitted with Mr. Pycroft's letter (noted in paragraph 1 of my letter), as the erection of new quarters for the Medical Officers and Subordinates of the Hospital, and of a new Medical College, &c., may be postponed for the present; but the project is complete as respects the Hospital itself, and is submitted for the sanction of the Government of India.

5. Under the sanction conveyed in the letter from the Government of India, dated 12th December 1859, No. 8,362, provision was made in the Budget of 1861-62 to the extent of 66,500 Rupees towards the building of the new wing; and it will be observed from the Budget of 1862-63 that the portions of the estimate as now brought forward for the new wing and its upper story, viz., 59,731 and 42,235 Rupees, total 1,01,966 Rupees, are entered therein, but that provision has been made to the extent of only 15,000 Rupees for the prosecution of the work in the current year. If more is required it will be given from the Reserve Fund.

No. 468. Read the following letter from Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 6th May 1862, No. 211 :—

SIR,

1. I have the honor to submit, for the information of Government, the accompanying letter No. 200, dated 3rd February 1862, from the Executive Engineer at Wellington, applying for a grant of Rupees 62-8-0 for repairing $2\frac{1}{2}$ miles of road leading to the Peat Bog at that station, calculated at the rate of 25 Rupees per mile.

‡ Original letter from Captain Farwell, No. 200, dated 3rd February 1862.

2. The repairs required to the road, are principally filling in ruts caused by cart wheels in very wet weather, and keeping clear the side, catch, and under drains.

3. This road leads into the cart road from Coonoor to Kotagherry, and thus shortens the distance by more than two miles from Ootacamund, viâ Wellington to Kotagherry. From the time this road was made passable for carts, it has always been used as the direct cart road of communication from Ootacamund, and Wellington to Kotagherry.

4. The Peat Bog road is not a metalled or gravelled one, but like most of the hill communications, it is cut out of solid hill side, provided with catch, under, and side drains.

5. In the Budget* for 1862-63, provision is made for the work to the extent of Rupees 250 the amount originally applied for by Captain Farewell, but as that Officer now asks for only Rupees 62-8 0 at the rate of 25 Rupees per mile, I do myself the honor to recommend that amount may be sanctioned for expenditure during the current official year, and that the balance Rupees 187-8-0 be cancelled.

* *Vide* Appendix to Part II.

6. Should a similar grant be required for this work in 1863-64, a separate application will be made for the same.

No. 469. ORDER THEREON, 23rd May 1862, No. 1,126.

The Government sanction the sum of Rupees $62\frac{1}{2}$, applied for in the foregoing letter, for repairing $2\frac{1}{2}$ miles of road leading to the Peat Bog at Wellington. This amount will be met from the sum of Rupees 250 provided for the work in the Budget of 1862-63, Appendix to Part II.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 470. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 1st May 1862, No. 14.

Read the following letter from Captain J. BEAN, District Engineer Malabar, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Calicut, 23rd April 1862, No. 383 :—

SIR,

1. In reply to Orders of Government and your Proceedings as per margin, I have the honor to report that I have only this day received information as to the cost of rubble and dressed stone, per cubic yard, at Cochin. The quarries are situated 12 miles from the Town, owing to which, the rates charged for this material are very high.

Proceedings of Deputy Chief Engineer, dated 8th March 1862, No. 11,269.

2. If a sea wall were built, I would suggest that rubble stone be thrown in, in the first instance, to form a foundation, and after a year or so, when the effects of the surf on it have been ascertained, that a wall be built of hammer-dressed stone. From the extremity of this wall, I would have a connecting wing-wall as far as the high sea beach, and a groyne at the other extremity.

3. The cost of a rubble stone wall 60 yards × 4 yards × 3 yards with a wing-wall 50 yards × 2 yards × 2 yards and a groyne 30 yards × 20 yards × 4 yards would amount at 2½ Rupees per yard, to Rupees 8,300. A wall of dressed stone in rear 60 yards × 2 yards × 3 yards would add, at the rate of 9 Rupees per yard, Rupees 3,200 to the cost.

4. The position of this wall and groyne would be at the site A on Vypeen Point in the sketch already forwarded to you. I have not made detailed plans and estimates but only calculated the cost approximately, because to do so it would be necessary for me to despatch a member of the Department, acquainted with surveying, to Cochin, to take plans and sections, which I cannot do at present.

5. A work of this kind may possibly have an injurious tendency towards causing the sea to act on the Harbour wall, on the north face of the town, and some of the merchants are apprehensive of this, in event of any estimate for the purpose being sanctioned.

6. As the sea encroaches and recedes year by year at Vypeen, and a favorable action takes place after the monsoon, I would still recommend that the yearly effects of the surf on the coast line at this spot be closely observed only, and no work be undertaken until the absolute necessity for it becomes apparent.

P. S.—Two groynes in the Cochin territory 60 yards long each would cost individually Rupees 12,000, if made substantially of rough stone in place of piling.

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1 Original letter, No. 383, dated 23rd April 1862.

1. Submitted for the orders of Government with reference to Proceedings of Madras Government, No. 575, 26th March 1862.

2. The District Engineer proposes in the event of a sea wall being built, that a foundation be formed, in the first instance, of rubble stone, and that after the effects of the surf have been watched for a year or so, the wall above be built of dressed stone, with a connecting wing-wall, at one end with the beach at high sea level, and a groyne at the other, at an approximate cost of Rupees 11,500.

(Signed) W. I. BIRDWOOD, Colonel,
Deputy Chief Engineer, Southern Circle.

No. 471. ORDER THEREON, 23rd May 1862, No. 1,127.

1. The Government agree with the District Engineer Malabar that the effect of the surf at the Vypeen Point of the Cochin Harbour should be closely observed, and that no work should be undertaken until the necessity for it is manifest.

2. The District Engineer will take steps to ascertain the effect produced during the south-west monsoon of the current year, and report the result after its close.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 472. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 6th May 1862, No. 192:—

SIR,

1 Letter from District Engineer of Coimbatore, No. 686, dated 15th April 1862, with Duplicate of Notice.
1 Endorsement from Deputy Chief Engineer, Southern Circle, dated 30th April 1862, No. 13,091.

With reference to the Proceedings of Government, dated 28th March 1862, No. 612, I have the honor to submit for information the accompanying papers as per margin, reporting that the necessary notice was served on Mr. Covenanted Overseer Evans on the 15th of April 1862, in the manner prescribed by the Acting Government Solicitor in his letter embodied in the Proceedings of Government above quoted.

No. 473. ORDER THEREON, 23rd May 1862, No. 1,128.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 474. Read the following Proceedings of the Madras Government in the Military Department, dated 16th May 1862, No. 1,791:—

Returning to Chief Engineer for re-consideration estimate for constructing a Hospital Serjeant's Quarters at Bellary with an observation that it is very high, and requiring that the result of the reference should be communicated to the Military Department. (Vide Military Proceedings, 16th May 1862, Nos. 349-350.)

No. 475. ORDER THEREON, 23rd May 1862, No. 1,129.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for early attention and report with reference to paragraph 1.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 476. Read the following Proceedings of the Madras Government in the Military Department, dated 16th May 1862, No. 1,792:—

Approving of the estimate for the construction of certain drains in connection with the Native Infantry Lines at Perambore. (Vide Military Proceedings, 16th May 1862, Nos. 355-356.)

No. 477. ORDER THEREON, 23rd May 1862, No. 1,130.

1. Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

2. The work will be proceeded with from the General Funds of the Presidency District for the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 478. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 9th May 1862, No. 363:—

SIR,

With reference to the Proceedings of Government No. 919, dated 2nd May 1862, I have the honor to suggest that the amount therein sanctioned for the temporary shed to be used as a double Skittle Alley in the Fort shall be met from the Reserve Fund of 1862-66, and whatever unrecoverable amount was spent prior to 1st May will have been charged accordingly against the former sanction.

No. 479. ORDER THEREON, 23rd May 1862, No. 1,131.

Temporary shed to be used as a double Skittle Alley in the Fort.

The Accountant General will be requested to place the sum of Rupees 730 at the disposal of the District Engineer Presidency from the Reserve Fund of the current year for the work noted in the margin.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Proceedings of the Madras Government, Public Works Department, 23rd May 1862.

No. 480. Read the following Proceedings of the Madras Government in the Revenue Department, dated 16th May 1862, No. 1,080 :—

Approving of the estimate for making certain additions and repairs to the Hoozoor Printing Office and adjoining rooms in the Collector's Kucheri in the District of Tinnevelly. (Vide Revenue Proceedings, 16th May 1862, Nos. 300-301.)

No. 481. ORDER THEREON, 23rd May 1862, No. 1,132.

1. Communicated to the Deputy Chief Engineer, Southern Circle, for information and guidance.

2. The work will be executed from the sum entered in Part II of the Budget for the current year, under the head of "Repairs to Revenue Buildings."

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 482. Read the following Proceedings of the Madras Government in the Judicial Department, dated 16th May 1862, No. 796 :—

Sanctioning the Estimates for the construction of a Cookroom, Godown, Stables and Coach-house to the Penitentiary Madras, and directing that the Stables should not be exposed to the public road. (Vide Judicial Proceedings, 16th May 1862, Nos. 118-119.)

No. 483. ORDER THEREON, 23rd May 1862, No. 1,133.

1. Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

2. The attention of the District Engineer, Presidency, should be called to paragraph 2 of the orders in the Judicial Department.

3. The work will be executed from the general funds of the Presidency District for the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 484. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 9th May 1862, No. 299/N 101.

Read the following letter from Captain JOHN MULLINS, District Engineer, Nellore, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Nellore, 2nd May 1862, No. 891 :—

SIR,

1. With reference to my letter No. 799, of the 22nd April 1862, I have the honor as required by paragraph 6, Chapter X, of the New Code, to forward the translation of the proceedings of the Inquest held on the bodies of Venkataroyalu and Mr. Neely, the former of whom was killed, and the latter so much injured, that he died a few days subsequently by an accident to the quarries from the explosion of a blast.

2. It will be seen that the conclusions of the Inquest as to the cause of the accident are similar to those which I have already reported,* but that the circumstances are stated to be somewhat different. As however the firing of the charge would not have been attempted, had the needle broken in the hole, and as the failure of the blast was reported by Mr. Neely to Overseer Wiffen some hours before the accident occurred, I think that probably the Inquest gives an incorrect version of the accident, as respects this point.

* Letter No. 727, dated 12th April 1862.

3. I also beg to forward a copy of the Magistrate's covering letter to the Inquest Proceedings, and with reference to paragraphs 3 and 4 thereof to remark that the accident arose not

from want of either proper supervision or proper instruments, but from the omission of the precaution to destroy the charge by keeping the hole well wetted. Iron instruments are necessary to remove the tamping of a blast hole, not a charge of powder as the Magistrate appears to think, and Mr. Neely was qualified both by previous occupation and recent experience to manage the operation in question, and to be cognizant of the danger attending it, but like most persons engaged in such work for any length of time, he probably thought unnecessary the precaution which would have done away with all danger.

1 Letter from the District Engineer, Nellore, No. 891, dated 2nd May 1862, with two enclosures.

Submitted to Government in continuation of Endorsement, No. 283, dated 28th April 1862.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 485. ORDER THEREON, 23rd May 1862, No. 1,134.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 486. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated 5th May 1862, No. 4:—

SIR,

1. With reference to the Proceedings of Government dated 29th ultimo, No. 860, I have the honor to state, that the rent of the Office and Store rooms, referred to therein, had, up to August last, been passed in my Office, under the general sanction accorded for preliminary operations, but as the buildings were afterwards reported to be required for permanent occupation, the subsequent payments were held in abeyance, as I considered they should be supported by a special sanction.

2. The provision made under the head Office Contingencies, &c., in the Budget of the past and current year, will be sufficient to meet the charges in question. The payments for which the sanction of Government is required is for those made since September last.

No. 487. ORDER THEREON, 23rd May 1862, No. 1,135.

Under the explanation now afforded the Government sanction the renting of buildings for Offices and Store rooms in the Divisions from September 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 488. Read the following Proceedings of the Madras Government in the Judicial Department, dated 16th May 1862, No. 795:—

Communicating to the Collector of Malabar and the Session Judge of Tellicherry letter from the Advocate General, and requesting the former to furnish him with a Certificate of the property of the convict Francis Luis D'Almeida, and the latter with a copy or extract showing the said convict's conviction for forgery.

(Vide Judicial Proceedings, 16th May 1862, Nos. 116-117.)

No. 489. ORDER THEREON, 23rd May 1862, No. 1,136.

Communicated to the Deputy Chief Engineer, Southern Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 490. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, Public Works Department, dated Chepauk, 9th October 1861, No. 5,752 :—

SIR,

1. With reference to paragraph 8 of their Proceedings No. 1,808, dated 25th August 1860, I have the honor to report for the information of Government, that in Circular No. LXVII, dated 15th September 1860, all District Engineers were requested to furnish information on the following points :—

1 Abstract of District Engineers' replies.
22 Letters from District Engineers, with five enclosures.

(1.) As to what steps had been taken for planting trees on channel banks and along them.

(2.) In the event of nothing having been hitherto done, as to the channel banks on which they would propose to commence planting, and the length of such channels.

(3.) As to whether any local means existed for providing funds for this purpose.

2. In pursuance of the above Circular, the accompanying replies have been received from the local Officers, and for convenience of reference I enclose an abstract of them prepared in the Central Office.

Ganjam.
Vizagapatam.
Nellore.
Cuddapah.
Kurnool.
Trichinopoly.
Madura.
Tinnevelly.
Coimbatore.

3. It will be observed that nothing has been done towards the planting of trees on channel banks in the Districts noted in the margin ; that there are no channels in the Upper Godavery, North and South Canara and Malabar ; that there are none at the Presidency under the charge of the Public Works Department ; that in Tanjore no scope is allowed to the Department for the planting of trees ; and that the only Districts in which trees have been planted are the Godavery, Kistna, Madras, North Arcot, South Arcot and Salem.

Godavery.
Kistna.
Nellore.
Cuddapah.
Madras.
South Arcot.
Trichinopoly.
Madura.
Tinnevelly.
Coimbatore.
Salem.

4. No outlay on account of the planting of trees has been recommended by the District Engineers Ganjam, Vizagapatam, Bellary, Kurnool and North Arcot, while in the Districts noted in the margin, the measure is advocated by the local Officers.

5. In the Madras District Captain Moberly has asked for an annual allowance of Rupees 252 to admit of his extending the avenues on the East Coast Canal. The District Engineer Tinnevelly has submitted an estsmate amounting to Rs. 34,600 for planting twenty-five channels, extending over a distance of 95 miles. The District Engineer Trichinopoly reports that the Collector has placed a sum of 400 Rupees at his disposal, and that it is his intention to expend that amount in the planting of trees on the Cauvery and Punnairy Channels. The other Officers who have recommended the planting of trees have asked for no special grants for the purpose. In the Godavery and Kistna, the local Officers are unable for want of data to prepare estimates. In Nellore the District Engineer recommends that the carrying out of the measure should be entrusted to the Collector. In Cuddapah the Executive Officers have been desired to submit estimates, after determining the channels to be planted. In South Arcot the planting of trees cannot immediately be commenced, owing to the old channels being crooked, and the banks encroached upon. The District Engineers Madura and Coimbatore have furnished no reason for having omitted to apply for a special grant, while in Salem the District Engineer reports that he has contrived to plant 20,000 Palmira trees on the Cauvery Channel banks with the aid of his Channel establishment and without incurring any expense whatever on that account ; and that moreover, it is his intention to plant 15,000 more shortly.

Ganjam.
Nellore.
Bellary.
Kurnool.
South Arcot
Madras.
Madura.
Salem.
Tanjore.

6. There are no local funds available for the planting of trees in Vizagapatam, Kistna, Cuddapah, Tinnevelly and Coimbatore. With regard to the Districts noted in the margin the local Officers are silent on the subject. From the reply of the District Engineer, North Arcot, to the Circular quoted in paragraph 1, it appears that there is a small local fund available, but the exact amount standing to the credit of that fund is not stated. In Trichinopoly, it is evident from the circumstance of 400 Rupees

having been placed by the Collector at the disposal of the District Engineer, that local means exist for the planting of trees on the Channels in that District. With regard, to the Godavery District, I would only refer to the Accounts Current of the "grass fund," submitted with my letter No. 7,452, dated 28th November 1860, showing the total receipts, disbursement, and cash remaining* on hand on the 31st October last.

*Rupees 2,820-0-3.

7. On a review of the replies of the local Officers, I would beg to recommend, that in addition to what has already been done in the Godavery and Kistna, the planting of trees should continue in those Districts where the Channels have been cut to their full width, which is not the case yet generally in the latter District, and that the aloe fence should be used in lieu of timber rails.

Godavery. Kistna. Nellore. Madura. Tinnevelly. Coimbatore.

8. With a view to obtain data to estimate the expense of the above measure in the various Districts, I would suggest that 10 miles of aloe fencing and planting should at once be put in hand on the Channels in the Districts marginally noted, and that the Channel establishments (either sanctioned by Government or charged to the estimates) be entrusted with the duty of supervising the planting of the trees and aloe fencing and of taking care of them; the expense incurred for plants and planting being charged to the general repair funds of each District to be limited to Rupees 500 in the current year.

9. In the Districts where no Local Funds at present exist, I would suggest that a grass fund, similar to that in the Godavery District, be at once formed, and that the collections from that source, as well as from the poundage of cattle, which should be introduced into all Districts, be made available to defray the expenses attendant on the carrying out of the measure now proposed.

No. 491. ORDER THEREON, 23rd May 1862, No. 1,137.

1. In this letter, the Chief Engineer replies to paragraph 8 of the Order of Government dated 25th August 1860, No. 1,808, which required a report of what had been done in the several Districts, in planting trees on Channel banks, a subject which had been originally suggested to them in 1855, in consequence of a complaint from Lieutenant Moberly of the irregular and injurious mode in which water was being taken by the villagers from the new Kistna Anicut Channels.† The Chief Engineer points out that little or nothing has been done in many Districts, and suggests that the planting of trees should continue in those Districts in which the Channels have been cut to their full width, and that the aloe fence should be used in lieu of timber rails.

† Vide Proceedings of Government 22nd September 1855, No. 576.

‡ Godavery. Kistna. Nellore. Madura. Tinnevelly. Coimbatore.

2. With the view of ascertaining the probable cost of these measures, the Chief Engineer further suggests that 10 miles of fencing in and planting should be at once taken in hand on the Channels in some ‡ of the Districts, and that the expense incurred for the purpose be charged to the general repair fund of each District to the extent of Rupees 500 in the year; the supervision of the planting, &c., being entrusted to the Channel establishments.

3. The Government approve the propriety of fencing in and planting the Channel banks in the manner suggested; and they sanction the proposal to draw upon the repair funds of 1862-63 to the extent of 500 Rupees for each District. Where local funds exist however, and are available for the purpose, the expense might be borne by such funds, and it is only when such is not the case that it should be charged to repairs. It is to be observed, that in Salem it was found practicable to do much in the way of planting the banks with the aid of the Channel establishments, and without any extra cost whatever; and the District Engineer promises to do more without any special grant. It is not impossible that the same may be done in other Districts possessing similar facilities. The Channel establishments cannot have sufficient employment at all seasons; and with a watchful control over them on the part of the District Engineer and the Range Officers, the planting and fencing might be carried on without much additional cost. It is not necessary that the planting or fencing should be done all at once, it may be done gradually

as time can be found by the establishment after attending to their proper duties. The Deputy Chief Engineers will be good enough to consider this point, and, wherever practicable, to cause measures to be adopted to have this done, and to ascertain from time to time that it is done. A small sum might be required for purchasing seeds and plants in Districts where they cannot be got free of expense as in Salem; and this may be taken from the local funds, where such may exist, and where that is not the case, from the irrigation repair funds.

4. The suggestion of the Chief Engineer, made in paragraph 9 of his letter, to create a grass fund in Districts in which no local fund of this kind exists at present is approved. The proceeds should be paid into the Collector's Treasury, as directed in paragraph 7 of the Order of Government dated 25th August 1860, No. 1,808.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 492. Read the following letter from C. F. CHAMIER, Esq., Tamil Translator to Government, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Madras, 1st May 1862, No. 60:—

SIR,

1. I have the honor, with reference to the Order of Government, dated 12th ultimo, No. 414, to forward herewith an English translation of the Tamil paper* on the Forts in the Coimbatore District.

* Herewith returned.

2. The other paper is merely transcript of a story to be found in Mahábhárat, which has long been in print.

No. 493. ORDER THEREON, 24th May 1862, No. 1,138.

The translations received with the foregoing letter will be forwarded to the Madras Literary Society.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 494. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 15th May 1862, No. 591:—

SIR,

1. I have the honor to submit herewith for the consideration of Government an Estimate amounting to Rupees 775, for certain alterations required to adapt the building given up in the Chepauk compound to the Forest Department for the purposes of an Office for the Conservator. It appears to have been framed prior to the receipt by the Presidency District Engineer of the order of Government sanctioning the addition of a verandah on the western side; but I submit it in order that no time may be lost in commencing work which is essential, viz., the fixing of weather boarding and reversing and repair of the glazed doors. The amount to be allotted from the Reserve Fund.

1 Letter from the District Engineer Presidency, No. 88, dated 7th May 1862.
1 Estimate.
1 Specification.
No. 831, dated 25th April 1862.

2. In the meantime I beg Government will be good enough to pass orders regarding the addition of a north and south verandah proposed by Colonel Hitchins, and the formation of small waiting rooms at the corners, which is I think expedient. The question as to constructing an extra room in the Office for the Conservator might lie over. That Officer can be so very seldom at Madras that it seems scarcely necessary to disarrange the building for this object.

No. 495. ORDER THEREON, 24th May 1862, No. 1,139.

1. In Proceedings No. 441, dated 28th February 1862, Revenue Department, the Government called for Estimates for weather boards and glazed windows and for matting the southern Bungalow at Chepauk, made over for an Office to the Conservator of Forests.

2. In their subsequent Orders No. 830, dated 14th April 1862, Revenue Department, the Government requested that an Estimate might be submitted for a verandah to the western end of the above mentioned building.

3. The Estimate submitted with this letter provides for glazed windows and for weather boards in the north, and over all the windows on the east, south and west sides of the Bungalow.

4. As it is evident that in framing the Estimate under notice the Orders of Government No. 830, dated 14th April 1862, directing that a verandah be constructed on the western end of the building, have not been attended to, and as, moreover, no provision is made therein for matting, the Government resolve to return the same to the Deputy Chief Engineer, Central Circle, with a request that it may be revised and re-submitted for sanction at an early date.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 496. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 16th May 1862, No. 655:—

SIR,

1. With reference to paragraph 6 of the Proceedings of Government, dated 5th instant, No. 955, I have the honor to state that the construction of the Civil Dispensary was authorized to be entered in the Budget of 1860-61, and was accordingly included in the manuscript Budget submitted to Government, but in consequence of the state of the finances no amount was proposed for expenditure in that year, and the work was omitted in the Government Office from the printed Budget along with several other works for which no funds were allowed.

2. In the Budget for 1861-62, received from the Kistna District, the work in question was included, but as Captain Ryves, the then Acting District Engineer, was of opinion that there were other works in the District of greater importance, and as he proposed no amount for expenditure in that year, it was omitted from the Budget sent to Government.

No. 497. ORDER THEREON, 24th May 1862, No. 1,140.

The Government will await the receipt of the further information called for from the Board of Revenue and the Deputy Chief Engineer, Northern Circle, in paragraphs 2, 3, 4 and 5 of the Orders quoted by the Chief Engineer.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 498. Read the following Endorsement of the Deputy Chief Engineer, Southern Circle, dated Chepauk, 28th April 1862, No. 12,990.

Read the following letter from Captain W. C. PALMER, Acting District Engineer, Trichinopoly, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Trichinopoly, 22nd February 1862, No. 1,776 :—

SIR,

1 Plan.
1 Estimate.
1 Abstract do.
1 Specification.

1. I have the honor to forward you the estimate for improving the road from Trichinopoly to Salem on the amount sanctioned in Government Order No. 2,366 of 24th December 1861, Rupees 8,000.

2. The estimate has been framed after my personal inspection of the road, and I have allowed stone jelly for the first two miles as I consider it urgently necessary there, in consequence of the very heavy and increased traffic over that portion of it from the bandies bringing in the produce of the Torriore country down the Manachanellore road.

3. I have commenced the collection of materials and the work is progressing as rapidly as the number of bandies obtainable will admit, the delay in submitting the estimate arose from the difficulty of obtaining Contractors to undertake the work on reasonable terms, and until they were settled with, I could not correctly fix the rates.

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1 Original letter, No. 1,776.
1 Specification.
1 Plan.
1 Abstract estimate, Rupees 8,000.

1. Submitted for the information of Government, with reference to their Proceedings, No. 2,366, dated 24th December 1861. The Deputy Chief Engineer, Southern Circle, has the honor to state that the amount, viz., Rupees 8,000, of the estimate for improving the Salem road has already been sanctioned by Government in their Proceedings quoted above ; the sketch map, specification, and estimate, are herewith forwarded for approval.

2. Captain Palmer has been requested to report on the progress of work on this road up to 30th April 1862, which will be submitted to Government on receipt.

(Signed) W. I. BIRDWOOD, Colonel,
Deput Chief Engineer, Southern Circle.

No. 499. ORDER THEREON, 24th May 1862, No. 1,141.

1. The Proceedings of Government, 24th December 1861, No. 2,366, sanctioned the Chief Engineer's proposal to take 3,000 Rupees out of the 15,000 Rupees sanctioned for the Caroor and Arealoor roads, and lay it out in gravelling the Salem and Trichinopoly road in addition to the Rupees 5,000 granted for this latter line, thus making Rupees 8,000 in all. The money, however, was to come out of the one and a half lac fund which ceased to be available after the 30th April 1862. If the work was not completed therefore before that date, it becomes necessary to report from what source it is proposed to meet the remaining expenditure under the estimate of 8,000 Rupees now submitted, subsequent to the above date.

2. The delay in submitting the estimate is sufficiently accounted for by the District Engineer, but it appears to have been detained for two months in the Office of the Deputy Chief Engineer, Southern Circle, for which no reason is assigned.

3. The Contractor's rates for metal and gravel are high. It is to be hoped that the work will be done for the outlay.

4. The Government will await the report promised in the 2nd paragraph of the above Endorsement.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 500. Read the following letter from G. J. MOBERLY, Esq., Superintendent Government Telegraphs, Madras Circle, to A. J. ARBUTHNOT, Esq., Acting Chief Secretary to Government, Fort Saint George, dated Madras 13th May 1862, No. 107 :—

SIR,

In consequence of the abolition of the Printing Establishment of this Office, I have the honor to request you will have the goodness to move His Excellency the Governor in Council to authorize the Chief Engineer, Department Public Works, to furnish this Office with a Lithographic Press complete 24 in + 32 inches.

No. 501. ORDER THEREON, 24th May 1862, No. 1,142.

Referred to the Chief Engineer for report as to whether a Press of the description referred to in this letter can be supplied from the Central Office, and if so, at what cost.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 502. Read the following Memorandum from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 8th May 1862, No. 297 :—

In pursuance of the Orders of Government quoted at foot,* the Acting Deputy Chief Engineer, Northern Circle, has the honor to recommend the allotment from the Reserve Fund of 1862-63 of funds to the extent of Rupees 53,551 for the works and Districts, as follows :—

* Orders of Government. No.	Date.	Districts.	Works.	Amount.	
				RS.	
275	20th Feb. 1862...	Kistna...........	Trunk Road No. 7...........	5,000	Specially applied for in letter No. 296, dated 8th May 1862.
580	26th March ,, ...	Do.	Trunk Road No. 6...........	270	
625	31st ,, ,, ...	Ganjam	Mahindra Bridges...........	17,740	
658	2nd April ,, ...	Vizagapatam..	Salt Pans...........	9,820	
698	7th ,, ,, ...	Nellore... ...	Road Dams...........	1,750	
772	15th ,, ,, ...	Kurnool... ...	Road from Nundial towards Cuddapah...........	7,000	
843	28th ,, ,, ...	Godavery......	High Level Canal...........	11,675	
868	29th ,, ,, ...	Ganjam	Maintenance allowance for the road between Russelcondah and Mojagodu...	296	
			Total......	53,551	

No. 503. ORDER THEREON, 24th May 1862, No. 1,143.

The Accountant General will be requested to place the sums mentioned in the foregoing letter, amounting in the aggregate to Rupees 53,551, at the disposal of the several District Engineers from the Reserve Fund of the current year, with a view to the execution of the several works enumerated by the Acting Deputy Chief Engineer, Northern Circle.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 504. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer in charge Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 17th May 1862, No. 687 :—

SIR,

1. I have the honor to submit herewith an Estimate amounting to Rupees 1,300, for constructing a Chuttrum or place of shelter for Coolies at Coonoor, Neilgherries, Coimbatore District, which the Collector and District Engineer represent as being absolutely indispensable from the greatly increasing goods traffic by Coolies up the Coonoor Ghát which is now established.

2 Letters from District Engineer Nos. 542 and 676, dated 4th February and 11th April 1862.
1 Do. from Collector, No. 294, dated 6th November 1861.
1 Plan.
1 Specification.
1 Abstract estimate.

2. The District Engineer, writing before the close of the last official year, expresses* a wish that the cost of the work should be defrayed out of the District Local Fund, but as a new year has commenced during which there will be heavy demands upon that fund, and as the Coonoor Ghát may be considered essentially useful as a traffic line to the whole community of the Presidency I would suggest that the amount now applied for should be allotted out of the General Reserve Fund.

* No. 542, dated 4th February 1862.

No. 505. ORDER THEREON, 24th May 1862, No. 1,144.

The estimate submitted with the above letter appears high for the class of building proposed to be erected at Coonoor, and the Government observe that the late Collector in a note at the foot of Captain Goddard's letter states that he built a similar shed which stood five years without repairs for Rupees 500. The Government would wish to know the cause of the great difference between this sum and that now asked for.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 506. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 9th May 1862, No. 5 :—

SIR,

With reference to the Proceedings of Government, dated 28th March last, No. 596, the Agent submits the enclosed plan and estimate,* for increasing the headway of the bridges from 12 to 15 feet, and requests sanction for the increased cost caused thereby, amounting in aggregate to Rupees 500 for two bridges, one in the fourth, and the other in the fifth portions of the first section of the main Canal.

* In letter No. 148, accompanying.

No. 507. ORDER THEREON, 24th May 1862, No. 1,145.

The Government sanction the additional sum of Rupees 500 applied for in this letter as the cost of increasing from 12 to 15 feet the headway of two bridges in the fourth and fifth portions of the first section of the Irrigation Company's Main Canal.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 508. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 15th May 1862, No. 620 :—

SIR,

In reply to the Proceedings of Government, No. 933, dated 3rd May 1862, I have the honor to state that the arrangement sanctioned in their Orders of the 7th November 1861, No. 1,498, paragraph 3, may be adopted for defraying the further charge of Rupees 120 sanctioned for carriage hire to Mr. Doderet, Mathematical Instrument maker, during the additional two months it is proposed to allow him to remain at the Observatory.

No. 509. ORDER THEREON, 24th May 1862, No. 1,146.

Communicated to the Public Department, for information, with reference to the Order in that Department, No. 512, dated 28th April 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 510. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 8th May 1862, No. 282 :—

SIR,

1 Letter from the District Engineer Presidency, No. 2,109, dated 25th January 1862.
1 Do. do. No. 2,390, dated 17th February 1862, with one enclosure.
1 Plan.
1 Estimate.
1 Data.

1. I have the honor to forward a plan and estimate, amounting to Rupees 1,412, for an iron railing proposed to be substituted for the pottery balustrades around the upper verandah of the new wing of the General Hospital now under construction.

2. The objection to the balustrade in the sanctioned estimate is that it is very liable to be broken, and to some extent would impede the free circulation of air, the District Engineer deprecates the use of it and proposes placing iron railings similar to those at the European Barracks in the Fort.

3. As this is no doubt an improvement as regards durability of work and better ventilation to the building, I have no hesitation in recommending the same for the approval of Government. The difference between the former sanctioned estimate and the present, is Rupees 799, which I beg may be authorized from the Reserve Fund of 1862-63.

4. I have not thought it requisite to delay the submission of this estimate to Government by referring it to the Principal Inspector General Medical Department, or to His Excellency the Commander-in-Chief, as it appears to me to be simply a matter of professional detail.

No. 511. ORDER THEREON, 24th May 1862, No. 1,147.

The Government approve of the substitution of an iron railing for the balustrade provided for in the sanctioned estimate for the new wing to the General Hospital, and sanction the estimate submitted with the above letter amounting to Rupees 1,412. The difference (Rupees 799) between the present estimate and the amount* provided for in that sanctioned in the orders marginally noted, on account of pottery balustrades, will be met from the General Funds of the Presidency District for the current year.

* Rupees 613.
No. 1,435, dated 19th October 1861, Public Department.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 512. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 6th May 1862, No. 177:—

SIR,

1. Referring to the Order of Government, No. 622, dated 27th March 1861, sanctioning Rupees 555 for wooden railings to the Sea Custom House, and No. 820, of the 24th April 1862, sanctioning an extra sum of Rupees 155 on account of enhanced cost of timber, I have the honor to forward a supplemental estimate, amounting to Rupees 120, for completing the works.

1 Letter from the District Engineer, Presidency, No. 2,797, dated 1st April 1862, with one enclosure.
1 Estimate.

2. The original estimate was prepared for fifty running feet less than the actual requirement. Lieutenant Wood, before commencing work ordered in the Proceedings of Government No. 622, of the 27th March 1861, compared the measurements on the ground with those entered in the estimate and found the above deficiency. The first estimate was framed on measurements supplied by Lieutenant Wood, assisted by a Sub-Overseer and a Conicopoly, and the short entry in the estimate arose apparently from an error in entering in the Note book of one of the lengths measured.

3. As it was purely an oversight, I recommend that the present additional estimate may be sanctioned, the amount to be paid from the Reserve Fund of 1862-63.

No. 513. ORDER THEREON, 24th May 1862, No. 1,148.

The additional sum asked for, viz., Rupees 120, is sanctioned accordingly. The amount will be provided from the General Funds of the Presidency District for 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 514. Read the following Endorsement of the Officer in charge of the Audit and Account Departments, dated Chepauk, 3rd May 1862, No. 112.

Read the following letter from A. PURVIS, Esq., Collector of Rajahmundry, to Colonel C. E. FABER, Chief Engineer in the D. P. W., dated Bendamoorlunka, 18th May 1857, No. 89:—

SIR,

1. With reference to items Nos. 29 to 39 in the Statement of "Unpassed expenditure," I have the honor to forward a Bill for Rupees 3,744-11-5, for sanction.

2. The difference of Rupees 4,116-1-5 appears to have been expended—

Rupees 100 on repairs in the Taky Estate,

Rupees 212 on do. in the Moongonda Estate,

Rupees 3,579-9-5 on do. in the Peddapoor do.

leaving Rupees 224-8-0, of which Rupees 219-14-0 appears to have been received into the Treasury on account of unexpended balance of advance made for repairs in the Pippora Mootah and credited to the Pittapoor Estate instead of to Government. The remaining sum of Rupees 4-10-0 has since been discovered to have been received into this Treasury in the year 1844.

3. Of these three items which were expended on repairs in Estates under temporary management and erroneously charged to Government, the first, and 2,163-9-5 of the third, are included in the sum of Rupees 16,746-15-0 sanctioned by Government under date the 25th May 1848 for repairs, and executed in the year 1846 in the Estates then under management. The second item is included in Rupees 6,977-7-0 sanctioned under date the 18th March 1847 for repairs, &c., executed in the year 1845 in Estates then under management. The remaining sum of Rupees 1,416 of the third item, is included in the sum of Rupees 15,732-5-0 sanctioned under date the 3rd August 1849 for works performed in the Estates under management for 1847.

4. As these sums amounting to Rupees 4,111-7-5* cannot now be recovered, I have the honor to request with the view to a proper adjustment of the charge that sanction may be given to the same being borne by Government.

	RS.	A.	P.
* Taky Estate............	100	0	0
Moongonda do.	212	0	0
Peddapoor do.	3,579	9	5
Pittapoor do.	219	14	0
Total...	4,111	7	5

Statement of the works executed during the undermentioned years in the District of Rajahmundry.

Names of Táluqs.	Names of Villages.	Year in which the work was executed.	Particulars of work.	Work actually performed.	Price per Yard.	Amount of each work. RS.	A.	P.	Total. RS.	A.	P.	Remarks.
1 Amalapore ...	Samuntacoorroo.	1840	For repairing Samuntacoorroo Ghuttoo...	1,319	... At 5 pice per Yd.	34	5	7	34	5	7	This charge was actually incurred on account of Government, but overlooked at the time of the preparation of the Bill.
2 Nagaram ...	Yeadarada ...	1841	For constructing a Sluice to Ally Cálva ...	...	...	191	0	0				Do.
3 Pittapoor Division.	Ameenbada and Cottapilly	Do.	For repairing the bank of a tank conveying water to these villages.	413	... Do. ..	10	12	0	... 201	... 12	... 0	
4 Rajahmundry Táluq.	Rajahmundry ...	1842	Paid on contract for making an index to show the fall and rise of the Godavery at Rajahmundry.	...	...	3	12	7				
5 Mogultore ...	Yalamunchely...	Do.	For repairing shutters of the Sluice of Nuckala Cálva.	...	...	12	0	0	...	...	...	Do.
6 Tanookoo ...	Mullaiswaram, &c.	Do.	For planting Durbah grass on the bank of the Godavery.	Coolies 360	... At 2 As. each.	45	0	0				
7 Amalapore ...	Cundecooppa ...	Do.	For repairing tanks.	C. Yds. 3,840	... At 5 pice per Yd.	100	0	0	160	12	7	This amount was erroneously charged to Government.
8 Do. ...	Do. ...	1843	For do.	C. Yds. 3,840	... Do. ...	100	0	0	...	...	...	Do.
9 Tanookoo ...	....	Do.	Paid in excess of estimate to an extra Gumáshta for superintending the repairs performed to Bhoopiah and Woosooloomurroo Channels for one month.	...	...	10	0	0	... 110	... 0	... 0	*Vide* remark No. 1.
10 Raly	....	1844	For filling up breaches, &c., of the bank of the Godavery caused by the freshes.	1,09,046	... Do. ...	2,839	11	10	...	...	...	*Vide* do. No. 7.
		Do.	Pay of a Gumáshta for superintending the above work from 6th March to 8th July 1844 at 10 Rupees per mensem.	...	...	40	15	5				
11 Tanookoo ...	....	Do.	Pay of a Gumáshta for superintending the construction of a Sluice to Bhoopiah Calva for September 1844.	...	...	10	0	0	2,890	11	3	*Vide* do. No. 1.
12 Tadewulla ...	Certain villages in the Taduvoy Estate.	1845	For repairing tanks, &c.	1,224	... At 6 pice per Yd.	38	4	0	...	...	...	*Vide* do. No. 7.

13	Amalapore ...	Certain villages of Inavilly Estate.	1845	Paid Gumáshta who superintended the repairs performed in the villages of this Estate (when under attachment) at 10 Rupees per month, period unknown.	...	...	...	46 3 2	... ... *Vide* remark No. 7.
14	Capavaram ...	Vamaghery ...	Do.	For throwing earth over the Sluice near the village (on contract).	...	...	...	31 6 3	115 13 5 *Vide* do. No. 1.
15	Gootala Division.	Gootala	1846	Pay of the establishment employed to superintend the repairs of the bank of the Godavery and construction of sluices, viz.:— For 1 Gumáshta for July 1846, Rs. 10 0 0 1 Peon for do. ,, 4 0 0	...	...	...	14 0 0	14 0 0 Do.
16	Capavaram Táluq.	Valoogoobunda Estate.	1847	For repairing Tanks, &c...	1,382	8	At 5 pice per Yrd.	36 0 0	... ... *Vide* remark No. 7. 36 0 0
17	Bickaoole do.	Chintapully ...	1851	For do. the bank of Toolyabhaga Channel near the Lock.	290	12	A. P. At 1-4 do.	24 3 7	
18	Do. ...	....	Do.	Pay of the establishment employed on the Samulcotta Channel to distribute water to certain villages, viz.:— For 1 Gumáshta for October and November 1851 ... ...Rs. 20 0 0 2 Peons for October 1851 at 4 Rs. ... ...each 8-0-0 Deduct paid from the amount gained by exchange 103 ,, 7 5 9	...	...	...	27 5 9	51 9 4 *Vide* do. No. 1.
19	Nagaram Táluq.	Gunnavaram ...	1852	Pay of Peons employed in collecting supplies for the Aqueduct. For 12 Peons for 3 months at 3 Rupees each per month ... ...108 0 0 1 Peon for 2 months and 27 days at do. per do. ... ... 8 11 3 1 Do. for 1 month 3 0 0	...	...	...	119 11 3	119 11 3 This amount was incurred in the Collector's Department, but it does not appear that the Engineer Department was made aware of the same.
20	......	....	1853	Pay of an extra Gumáshta for November 1853 not included in the Bill for ordinary repairs executed in that year.	...	...	...	10 0 0	10 0 0 *Vide* remark No. 1
								Total.....	3,744 11 5

Rajahmundry District, Collector's Kacheri,
Bendamoorlunka, 18th May 1857.

(Signed) A. PURVIS, *Collector.*

(True Copy.)

(Signed) A. PURVIS, *Collector.*

1 Letter and one Statement, No. 89, dated 18th May 1857.

Submitted to Government with an intimation that the foregoing letter appears to have been lost sight of until the adjustment of the old accounts prior to 1856 of the Godavery District had been commenced in this Office. To close those accounts, however, the amount of the statement referred to by the Collector, viz., Rupees 3,744-11-5, and the sum of Rupees 4,111-7-5, being the amount expended on works in certain Estates, require to be adjusted, and as the Collector reports that the latter cannot now be recovered, authority is requested for writing it off to "profit and loss" and for the sum Rupees 3,744-11-5 in the accompanying Statement being admitted. At this distance of time it seems hopeless to effect a more satisfactory adjustment of these charges.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In charge of the Audit and Account Departments.

No. 515. ORDER THEREON, 24th May 1862, No. 1,149.

On the assurance of the Collector of Godavery that the sum of Rupees 4,111-7-5 outstanding for repairs executed to works in the several Estates under management in the old Rajahmundry District between the years 1844 and 1847 cannot now be recovered, the Government sanction it being written off as requested. The Bills for works executed in the same District previous to 1856, amounting in the aggregate to Rupees 3,744-11-5 are now passed.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 516. Read the following :—

CIRCULAR No. 31 OF 1862.

OFFICE MEMORANDUM.

PUBLIC WORKS DEPARTMENT.
Fort William, 26th April 1862.

1. The undersigned has the honor to forward for the information of the Government of Madras a copy of a Note on the distribution of the funds allowed for Public Works for the year 1862-63, submitted to His Excellency the Governor General in Council, and generally approved, as the basis for further detailed orders.

2. Particular attention is requested to paragraph 16, in which is stated the intention of the Government of India to hand over the Income Tax grant to the Local Administrations, to be dealt with as a portion of their Local Funds, so that proposals for works to be paid for from the Income Tax grant will henceforth be excluded from the Imperial Budgets.

3. Further instructions will shortly be issued on this and on certain other points relating to the administration of the Local Funds. The Funds will remain strictly at the disposal of Local Administrations as at present, but the Government of India contemplates the transfer to them of certain branches of Public Works income, that have hitherto been more or less considered part of the imperial revenues.

4. From the recent changes that have taken place in the Government and in this Office, it has been found impracticable to issue the detailed orders on the Budgets before the 1st May. They will be completed as early as possible, and meantime a general sketch of the proposed arrangements has been sent by Telegraph to the principal Governments and Administrations, conveying the substance of the annexed Note.

5. The undersigned having taken charge of this Office so lately, it is possible that he may have overlooked orders passed on works entered in the Budget, and that contradictory instructions may be given inadvertently in dealing with the details of the Budgets. If this is observed, it is requested that an early intimation of any error may be sent to this Department.

(Signed) R. STRACHEY, Lieut.-Colonel,
Secy. to the Govt. of India.

To the Secretary to the Government of Madras.

PUBLIC WORKS BUDGET, 1862-63.

1. The original Imperial assignment for the year 1862-63, on account of Public Works (Financial Resolution No. 11,950, dated 26th September 1861,) was 367½ lakhs. To this has now been added 20½ lakhs, making in all 388 lakhs. But besides the charges for Public Works proper, this sum has to meet, first, the cost of land supplied for Guaranteed Railways, and the charge for Government control ; second, the outlay for construction of the Electric Telegraph.

2. The charges for these Railway purposes amount to 13¾ lakhs ; for the Telegraph, to 9¾ lakhs ; in all 23¼ lakhs. This leaves for actual distribution for Public Works 364½ lakhs from Imperial Funds ; exclusive of the grants from the 1 per cent. Income Tax Fund, and of the Local Funds, which will be separately referred to hereafter.

3. The original distribution of the first assignment of 367½ lakhs, (D. P. W. Circular No. 97, dated 30th October 1861,) was as follows :—

Madras...	68 lakhs.
Bombay...	53 ,,
Bengal...	52½ ,,
N. W. P.	64½ ,,
Punjab...	50 ,,
Oudh...	16 ,,
Nagpoor...	9 ,,
Pegu...	10½ ,,
Tenasserim..	2 ,,
Alguada Lighthouse...	2 ,,
Straits...	4 ,,
Hyderabad, British...	4¼ ,,

Subsequent to this allotment, however, several territorial changes were made in the various Governments, which led to a re-adjustment of some of these amounts.

4. Saugor and Jubbulpoor were added to Nagpoor, forming the Central Provinces. In consequence of this it was ordered that a transfer of 5 lakhs should be made from the N. W. Provinces to the Central Provinces, leaving the former with 59½ lakhs, and the latter with 14 lakhs.

5. Again, Pegu and Tenasserim were fused into British Burmah; and the allotments of the whole of these Provinces, with that for the Alguada Lighthouse, amounted to 14½ lakhs. But Arracan also was taken from Bengal and added to Burmah. For this no special alteration has been ordered in the allotments. It may however be held that the transfer should have been 1¼ lakhs.

6. North Canara also was transferred from Madras to Bombay. The transfer that would have been equitable may be taken at 2¾ lakhs. No change of allotment was however ordered.

7. An additional allotment was further made to Hyderabad of 1¼ lakhs.

8. After the adjustments above noted have been made, the assignments first given would have become as follows:—

Madras	... 68 —2¾	= 65¼	lakhs.
Bombay	... 53 +2¾	= 55¾	,,
Bengal	... 52½—1¼	= 51¼	,,
N. W. P. ...	... 64½—5	= 59½	,,
Punjab	... ...	50	,,
Oudh	... ...	16	,,
Central Provinces	... 9 + 5	= 14	,,
British Burmah ...	... 14½+5¼	= 15¾	,,
Straits	... ...	4	,,
British Hyderabad	... 4¼+1¼	= 5½	,,

9. It may here be noticed that that the Governments that lost terriory have in *no instance* drawn out their Budgets to suit the reduced assignment due to them; while all those that have gained territory have been careful to enter at least as much as they were fairly entitled to on an equitable re-adjustment.

10. Before dealing with the Budget totals in detail, it becomes necessary to explain that a rather serious misconception had affected almost the whole of them. It has fortunately been possible in great measure to meet the disturbing effects thus produced, by help of the additional grants that have been made from the 1 per cent., Income Tax Fund; but still a considerable modification in several of the Budgets has become essential.

11. The original assignment of 367½ lakhs having been made when the financial position of the Government was supposed to be less favourable than it afterwards was shown to be, it was declared that this assignment for 1862-63 was to be held to *include* the sum that should be made available for remunerative works, according to Law, from the 1 per cent., of the Income Tax. Later, however, when the improved state of the finances was placed beyond doubt, a special grant of 38 lakhs was made on account of the 1 per cent., Income Tax Fund, over and above the Imperial assignment for 1861-62. (Financial Resolution No. 14,694, dated 26th December 1861). In distributing this sum it was laid down in the orders issued from this Department (Department Public Works, Circular No. 5, dated 8th January 1862,) that the assignment was to be considered absolute, and that it was not to lapse at the end of the Financial year, as ordinary grants lapse.

12. This last order, which tended to increase the complication, was rendered necessary by the Income Tax year not coinciding with the Financial year; the former ending in August, the latter in April. The proper amount of the grant for 1861-62 could not be determined before December 1862, when the result of the actual collections was known. It therefore became

practically impossible that the grant could be spent before the end of the Financial year 1861-62; and the same state of things would of course always recur.

13. Under these circumstances, it was natural for the Local Government to suppose, as they all have done in preparing their Budgets, with the exception of Bengal, that their assignments for 1862-63 were to cover the works to be paid for from the 1 per cent. Income Tax Fund of 1862-63; and that they were not called on to take any special notice of the unspent portion of the 1 per cent. Income Tax grant of 1861-62.

14. But as the Budget is in its essence a Financial Estimate, the expenditure from the Income Tax grant of 1861-62, that was expected to take place in 1862-63, should have appeared in the Budget of 1862-63; and in like manner, that portion of the grant for 1862-63, which would probably *not* have been spent in 1862-63, should have been excluded from that year's Budget.

15. The unspent portion of the 1 per cent grant for 1861-62 may be estimated at 30 lakhs out of the original 38 lakhs. The Budget of 1862-63 should therefore have included Income Tax works to be paid for from the 1861-62 grant to that amount; and assuming that the proportions of the grant, and of the expenditure, continued the same in 1862-63, the Budget should further have provided for Income Tax works to the value of 8 lakhs from the grant of 1862-63.

16. All of these difficulties, however, have been got over. The Government has stated its intention of making good the balance of the Income Tax grant for 1861-62 from the surplus revenue of that year, so that it will not appear at all as expenditure of 1862-63. Further, the Income Tax grant for 1862-63 is to be considered as made in advance, and as payable on the 1st May 1862, instead of at the end of the year, after the Income Tax accounts are made up. It is moreover decided that the Income Tax grant shall henceforth be handed over to the Local Governments to be dealt with as a portion of their Local Funds, so that it will not again appear in any way in the Imperial Budget of Public Works.

17. It will now be understood how, in dealing with the Budgets for 1862-63, it has become necessary to consider that the whole of the expenditure is Imperial. At the same time it will be seen that if for any reason it be found necessary to exclude works of the remunerative class from the Imperial Budget, which have been given a place there now, the several Governments will, in addition to their Imperial grant, still have the whole of their Income Tax grant to provide for such works. In fact, therefore, no real disappointment can take place in consequence of such changes, for an additional grant of 38 lakhs has been made from the Income Tax Fund to the Local Governments over and above the sum first assigned by the Government of India.

18. The necessity above alluded to, of excluding some of the proposed works from the Budgets as they have been submitted, arises from the large amount of the excess in these Budgets over the proper assignments as before set down. The excess amounts are follows:—

Madras	$5\frac{1}{4}$ lakhs.
Bengal	$1\frac{1}{4}$,,
N. W. P...	5 ,,
Punjab.	$0\frac{1}{2}$,,
Central Provinces	4 ,,
Total......	16 lakhs.

It is obvious that such an excess cannot be met unless by dealing with the body of some of the Budgets rather freely. How this is proposed to be done will next be explained.

19. *Madras.*—The Budget Total is 68 lakhs. But a sum of $2\frac{1}{2}$ lakhs is entered at the foot of this total as value of stores to be obtained from England, which, it is said, if taken from the assignment will be a serious deduction. But considering that Madars has a relief of $2\frac{3}{4}$ lakhs

from the transfer of Canara, for which no allowance is made in the Budget, it may fairly be called on to pay for the stores. This I propose to arrange as follows:—

	Rs.	Rs.
Budget Total		68,00,000
Deduct—		
Income Tax Works	2,08,543	
Repairs	41,457	
Total		2,50,000
		65,50,000
Add—		
For Stores		2,50,000
Revised Total		68,00,000

The equitable assignment, as before shown, would have been 65¼, so that a virtual addition of 2¾ lakhs has been given.

20. *Bombay.*—The Budget Total is 53 lakhs. This however provides nothing for the Harbour Defences, or for Canara, nor does it give a full allowance for the Agra and Bombay Road, a work which the Government of India desires to see brought to a close as soon as possible. To provide for these calls I propose to give the additional grant of 5 lakhs, which has been already promised for the Harbour Defences, and to adjust the remainder of the excess by a transfer of funds from Income Tax Works, and certain retrenchments of other sorts. This will be as follows:—

	Rs.	Rs.
Budget Total		53,00,000
Deduct—		
Military Works	81,312	
" Repairs	52,155	
Civil Works	13,014	
Income Tax Works	2,91,974	
Total		4,38,455
		48,61,545
Add—		
Military Works	5,00,000	
Canara	2,72,455	
Agra and Bombay Road ...	1,66,000	
		9,38,455
Revised Total... ...		58,00,000

This gives a net increase of 5 lakhs to Bombay.

21. *Bengal.*—The Budget Total is 52½ lakhs. This however includes no Income Tax Works for which a *separate* Budget is sent up. In the Bengal Budget provision is due for any Imperial works at Calcutta, the construction of which may be undertaken. I should then propose to put down on behalf of the Government of India, and in addition to the entries by the Government of Bengal:—

Post Office	1 lakh
Museum	1 "
University	1 "
Total ...	3 lakhs.

22. Also among the additional works desired by the Lieutenant Governor, the Presidency College might receive 1½ lakhs, and an addition of ½ lakh might be given to Saint James's Church. To met the requirements of these extra works, I should allow about ½ lakh more for Establishment, and as the Reserve is more than seems necessary, this could be reduced a little. The result would be, with certain other reductions, as follows :—

	Rs.	Rs.
Budget Total ...	...	52,50,000
Deduct—		
Military Works	10,838	
,, Repairs	24,550	
Civil ,, ...	31,200	
Reserve	40,712	
Total...	...	1,07,300
		51,42,700
Add...		
Post Office	1,00,000	
Museum	1,00,000	
University	1,00,000	
Presidency College	1,50,000	
Saint James's Church	50,000	
Establishments	57,300	
		5,57,300
Revised Total...	...	57,00,000

The equitable assignment having been 51¼ lakhs, this would give an increase of 5¾ lakhs to Bengal ; of which 3 lakhs would be for Imperial objects.

23. *North West Provinces.*—The Budget Total is 64½ lakhs. This it is necessary to reduce to meet the transfer of funds to the Central Provinces. The full amount of this would be 5 lakhs ; but in order to give a certain addition to the original assignment of the North West Provinces the deduction may be taken at only 4 lakhs, which will be equivalent to an extra grant of 1 lakh. This will be arranged as follows :—

	Rs.	Rs.
Budget Total		64,50,000
Deduct—		
Military Works	82,599	
,, Repairs	24,425	
Civil Works	1,60,216	
,, Repairs	71,633	
Income Tax Works	28,247	
Establishment	22,880	
Reserve	10,000	
Total		4,00,000
Revised Total		60,50,000

The equitable assignment being 59½ lakhs, this gives an addition of 1 lakh.

24. *Punjab.*—The Budget Total is 50½ lakhs. But it includes a charge of 1¾ lakhs for the maintenance of Ferries, which has been ordered to be struck out, the charge being made against the Ferry Receipts, and the net income only being brought forward into the Imperial accounts. The charge for Establishment is excessive, and should be largely reduced. To the reductions thus made, it is proposed to add one lakh in excess of the original grant, and to apply about 1½ lakhs to Military Works, 2½ lakhs to the Grand Trunk Road, Rupees 30,000 more to

Irrigation Works, in excess of the Budget allotments, striking out however about ½ lakh of Military and ¾ lakh of Civil Works from those brought forward. The result of this would be—

		Rs.	Rs.
	Budget Total		50,57,975
Deduct—			
	Military Works	50,000	
	,, Repairs	9,975	
	Civil Works	73,000	
	,, Repairs	1,75,000	
	Establishment...	1,00,000	
	Total		4,07,975
Add—			
	Military Works	1,22,318	
	G. T. Road	2,50,000	
	Baree Doab Canal	30,000	
	Other Civil Works	40,000	
	Reserve	7,682	
			4,50,000
	Revised Total		51,00,000

The original assignment was 50 lakhs, showing an increase of 1 lakh now proposed to be given.

25. *Oudh.*—The Budget Total is 16 lakhs. It is necessary to provide for Opium Buildings to the extent of 1 lakh, for which no Estimate is entered. A sum of about ¾ lakh can be transferred wihout inconvenience from the proposed outlay on roads to Military and Civil Works, as the Income Tax allotments of the past and present year will give an ample supply of funds for communications. These alterations will be affected as follows :—

		Rs.	Rs.
	Budget Total		16,00,000
Add—			
	Military Works...	40,000	
	Civil "	35,000	
	Opium Buildings	1,00,000	
	Total		1,75,000
			17,75,000
Deduct—			
	Roads		75,000
	Revised Total... ...		17,00,000

26 *Central Provinces.*—The Budget Total is 18 lakhs, which is 4 lakhs in excess of the assignment. Further, the Station of Nagode has not been provided for, and the repairs to the Great Deccan Road in Rewah are also omitted. To meet these points, and to give the means, as far as practicable, of opening out the roads of these Provinces, which are still so difficult of access, and through which our main line of Postal communication runs, it is proposed to give a further grant of 3½ lakhs, in addition to the 14 lakhs originally allotted, and to make some considerable modifications in the distribution of the allotments to the various services. The Chief part of these changes have already been ordered by the Government of India, and what is now contemplated is little more than carrying out orders that have been issued.

27. The following is what is proposed in detail :—

		Rs.	Rs.
	Budget Total...	...	18,00,000
Deduct—			
Military Works...	... ...	49,600	
Civil	... ...	32,200	
Roads, &c. ...	... ...	51,200	
	Total	...	1,33,000
			16,67,000
Add—			
Military Works (Nagpore)	... ...	40,000	
Road repairs (Rewah) ..	... ...	43,000	
			83,000
	Revised Total...	...	17,50,000

28. *British Burmah.*—The Budget Total is 13¾ lakhs, excluding the Alguada Lighthouse, for which a further sum of 3 lakhs more is asked. I should propose to give ½ lakh additional for Roads in Burmah, and ½ lakh additional for the Lighthouse, which will probably be enough. This allotment after certain other small changes will appear as follows :—

		Rs.	Rs.
	Budget Total	...	13,75,000
Deduct—			
Military Repairs	... ...	13,250	
Add—			
Roads...	... ...	81,250	
			50,000
	Revised Total	...	14,25,000
Add for Alguada Lighthouse...	...	...	2,50,000
	Total	...	16,75,000

29. For the remaining Provinces no change is necessary; the provision of 4 lakhs for the Straits, and 5½ lakhs for British charges in Hyderabad, appears sufficient.

30. The general result of what is now proposed is shown in the annexed figures:—

Total original assignment...	... ...	..	367½ lakhs.
Additional...	... ...	...	20½
	Total	...	388 lakhs.

31. This is distributed as follows :—

Madras ...	...	68 lakhs.
Bombay ...	...	58 ,,
Bengal ...	...	57 ,,
N. W. P....	...	60½ ,,
Punjab ...	...	51 ,,
Oudh ...	...	17 ,,
Central Provinces ...	...	17½ ,,
Burmah ...	...	16¾ ,,
Straits Settlements...	...	4 ,,
Hyderabad...	...	5½ ,,

Minor allotments—		
Coorg	...Rs. 25,000	3 lakhs
Ajmeer	... „ 7,000	
Rajpootana	... „ 22,000	
Central India	... „ 18,000	
Nimar	... „ 10,000	
„ Iron Works	... „ 1,30,000	
Port Blair	... „ 41,000	
Reserve	... „ 47,000	
Railway (purchase of land and Establishments for control)		$13\frac{1}{2}$ „
Electric Telegraph		$9\frac{3}{4}$ „
Reserve		$6\frac{1}{2}$ „
Grand Total ...		388 lakhs.

32. The above remarks complete all that has to be said regarding the general allotment of the Imperial assignment. Matters of detail will be dealt with hereafter in a separate Note.

33. In addition to the Imperial assignment, Mysore sends up a Budget for 12 lakhs, which calls for no special remarks here, and Hyderabad (Assigned Districts), a Budget for $1\frac{1}{4}$ lakhs.

34. The entire allotment from the 1 per cent. fund of the Income Tax for last year remaining unspent this year may be taken at least at 30 lacs; the new allotment is 38 lacs; in all 68 lacs.

35. The return of Local Funds available for Public Works is not complete, but the chief Provinces show the following returns:—

Madras	3 lakhs.
Bombay	$8\frac{3}{4}$ „
Bengal	19 „
N. W. P.	$18\frac{1}{2}$ „
Punjab	$17\frac{3}{4}$ „
Total ...	67 lakhs.

36. Besides these sums, the outlay on Guaranteed Railways may be taken as follows:—

Madras	$59\frac{1}{2}$ lakhs.
Bombay	207 „
Bengal	$165\frac{1}{2}$ „
N. W. P.	57 „
Punjab	21 „
Total ...	510 lakhs.

37. The aggregate expenditure in the whole of British India then on Public Works of all classes during the year 1862-63 may be taken as follows.—

Imperial outlay	388 lakhs.
Foreign „	$13\frac{1}{4}$ „
Income Tax	68 „
Local Funds	67 „
Guaratneed Railways	510 „
Grand Total ...	$1,046\frac{1}{4}$ lakhs.

so that no less than ten and a half million sterling is likely to be laid out in this manner; distributed approximately as follows:—

Madras	$1\frac{1}{4}$ million.
Bombay	$2\frac{3}{4}$ „
Bengal	$2\frac{1}{2}$ „
N. W. P.	$1\frac{1}{4}$ „
Punjab	1 „
Remainder	$1\frac{3}{4}$ „

(Signed) R. STRACHEY, Lieut.-Colonel,
Secy. to the Govt. of India.

No. 517. ORDER THEREON, 24th May 1862, No. 1,150.

1. Ordered to be communicated to the Chief Engineer, Deputy Chief Engineers Northern Southern, and Central Circles, and to the Officer in charge of the Audit and Account Departments of the Central Office in continuation of Proceedings, dated 8th May 1862, No. 994.

2. Out of the sum entered in the Budget for works to be done from the 1 per cent. Income Tax grant the Government of India have disallowed Rupees 2,08,543, to meet in part the extra sum of Rupees 2,50,000 applied for by this Government for Stores. The Governor in Council directs that instructions be issued at once to remove the following items from the Budget of Works to be undertaken from Imperials Funds. It is not intended that these works should be stopped; the District Engineers may proceed with those for which estimates have been sanctioned from the General Funds at their disposal, the amounts expended being hereafter replaced from the funds promised as an advance from the 1 per cent. Income Tax collections of the current year.

Circles.	Districts.	No. of the Item in the Budget.	Description of Work.	Amount of expenditure in 1862-63.	Total.
				RS.	RS.
Northern Circle.	Ganjam	111	Trunk Road from Nowpada to Casseeboogah	19,660	
	Godavery	60	Raising the Godavery Anicut	58,548	
	Kistna	69	Excavating two new channels in the eastern Delta of the Kistna or Captain Ryves' channels	15,939	
	Nellore	79	Improving the labour branch of the Jaffer Sahib's Channel	20,864	1,15,011
Central Circle.	South Canara...	54	Closing the mouth of the Goorapoor river...	6,300	
	Presidency	201	Widening the old bridge of the Elephant Stone Gate from 17 to 40 feet in the clear and reducing the slope of the two approaches to 1 in 40 feet	10,000	
	Do.	202	Widening the General Hospital Gate bridge from 25 to 40 feet in the clear and reducing the slope of the two approaches to 1 in 40 feet	10,000	
	Do.	56	Constructing approaches to the Madras Pier Works	15,000	
	Do.	200	Bridge over the Kuam Bar	25,000	
	Madras	135	Remetalling a portion of Trunk Road No. 6.	10,000	76,300
Southern Circle.	Madura	51	Madura Town water project	10,000	
	Coimbatore......	176	Widening the Hassanoor Ghát and improving the drainage of the road surface... ...	2,651	
	Tanjore	174	Salt road from Mayalore to Trenagherry ...	2,339	
	Do.	186	Bridges across the Manikanykuyar on road from Mayalore to Ternagherry... ...	2,242	17,232
			Total.........	......	2,08,543

3. In consequence of the sum of Rupees 41,457 (the balance of the probable expenditure on account of Stores during 1862-63) having been disallowed by the Government of India from the amount proposed for repairs, the following re-distribution is made amongst the several Districts. The District Engineers will be guided by these figures in drawing funds under the head of Repairs instead of by those entered in Abstract No. IV B, pages 34 to 36 of the Budget, and they will bear in mind that this reduction is not to interfere with the sum entered in Part II of the printed Budget under the head "Communications" (that amount being made up of permanent maintenance grants), nor with the figures entered under the head "Agricultural," as respects that portion which relates to the "Maintenance of Boats, Bridges, Ferries, Locks, and Neerganicum Establishments" (these also being fixed sanctions), the reductions should be made under each of the other heads, and a revised list in lieu of Part II of the Budget submitted for the information of Government.

Districts.	Amount entered in the Budget of 1862-63 for repairs.	Amount to be reduced.	Difference or the sum now authorized for expenditure in 1862-63.
	RS.	RS.	RS.
Ganjam ...	58,486	1,018	57,468
Vizagapatam	44,652	777	43,875
Godavery	2,89,736	5,045	2,84,691
Kistna	1,60,545	2,795	1,57,750
Nellore ...	1,06,910	1,861	1,05,049
Kurnool...	49,900	869	49,031
Cuddapah	1,14,155	1,987	1,12,168
Bellary	1,27,455	2,219	1,25,236
Madras	1,74,685	3,041	1,71,644
North Arcot	1,14,017	1,985	1,12,032
South Canara	37,768	657	37,111
Presidency	84,500	1,471	83,029
Bangalore	13,440	233	13,207
South Arcot	1,26,523	2,203	1,24,320
Tanjore...	2,38,684	4,156	2,34,528
Trichinopoly	1,10,721	1,928	1,08,793
Madura ...	1,04,639	1,822	1,02,817
Tinnevelly	1,28,488	2,237	1,26,251
Coimbatore	1,03,132	1,795	1,01,337
Salem ...	96,809	1,686	95,123
Malabar...	41,580	724	40,856
Wellington	16,184	281	15,903
Municipal Commissioners	27,397	477	26,920
Mysore ...	10,987	190	10,797
Total......	23,81,393	41,457	23,39,936

4. Rupees 6,00,000 entered in the Budget and marked A, not having been sanctioned by the Government of India, the Deputy Chief Engineer will issue instructions to the District Engineers of their respective Circles not to commence any such works without special orders from Government. This restriction is not in any way to interfere with the preparation and submission of plans and estimates for such works as may have been so conditionally entered.

5. The Chief Engineer will report how much of the sum allowed out of the 1 per cent. Income Tax Fund in 1861-62, was spent up to 30th April 1862.

6. A part from the usual Progress Report of works executed out of the Imperial Funds now annually submitted, the Deputy Chief Engineers will forward a separate report for works done out of the 1 per cent. Income Tax Fund. In cases in which a work may have been done with the aid of the two funds (Imperial and Income Tax for examples Nos. 111 and 60), the

circumstances should be noted in the column of remarks in both the Progress Reports, so that each document, when referred to separately, may show the exact expenditure upon works though done from different funds. These notes need not be in detail, simple remarks stating the amount spent out of each fund will be sufficient.

7. From paragraph 16 of Colonel Strachey's notes, forwarded with the above Circular, it is observed that the Income Tax will henceforth be at the disposal of the Local Government, and that the grant for 1862-63 is to be considered as made in advance and as payable on the 1st May, 1862, instead of at the end of the year after the Income Tax accounts are made up. Mr. Lushington is requested to state if he can advance fund to the extent at least of the reduction now made by the Government of India, viz., 2,08,534 (the full sum to be allotted being decided hereafter), under the authority conveyed in the paragraph above quoted. An early reply should be submitted to this reference as a fortnight of the official year has already elapsed.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 518. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 19th May 1862, No. 750:—

SIR,

I have the honor to submit for the orders of Government papers, as per margin, relative to a claim made by Mr. G. Clements, 3rd Class Mechanical Engineer, to arrears of salary for the time he was unemployed from the 11th February to the 28th April 1862, and to request that its payment may be authorized, as from the accompanying Memorandum it appears that the Civil Paymaster is unable to pass the Bills for the above period which Mr. Clements submitted for audit, without the special sanction of Government.

1 Memorandum from Civil Paymaster, dated 2nd May 1862, No. 174.
1 Do. to do. dated 9th May 1862, No. 329.
1 Do. from do. dated 10th May 1862, No. 189.

No. 519. ORDER THEREON, 24th May 1862, No. 1,151.

Mr. Mechanical Engineer Clements having in Proceedings No. 832, dated 25th April 1862, been reinstated in his employment, the Government authorize the Officiating Civil Paymaster to pass his salary Bills for the period intervening between the 11th February and the 28th April last.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 520. Read the following letter from H. A. MANGLES, Esq., Acting Deputy Auditor and Accountant General, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Fort Saint George, 21st May 1862, No. 27:—

SIR,

1. I have the honor to enclose an original Telegram* to my address from the Financial Secretary to the Government of India, dated the 16th instant, in which I am requested "to send up copies of the data supplied "by the Director of Public Instruction expressing the head under which each item is placed in "Budget Estimate under Debt." Though this message is not very clearly worded, yet I am inclined to suppose that the Financial Secretary alludes to the estimate for 1862-63, of the Director of Public Instruction on account of Educational Buildings and Repair of Buildings, the expenses of which are met from the "Educational Building Fund" subordinate to "Local Funds," under "Public Debt."

* To be returned.

Letter from Secretary to Government of India, dated 27th July 1861. No. 68 to Madras Government. Order of Madras Government, 27th August 1861, No. 1,625.

2. As under the Budget Rules recently sanctioned by the Government of India, a separate Budget has been ordered to be prepared on account of Local Funds, I beg to request that the information required by the Financial Secretary to the Government of India, in his Telegram above referred to, may be furnished to me for transmission to that Officer by the next Mail Steamer, or forwarded direct by Government to Calcutta.

3. The favor of an early reply is requested to enable me to telegraph the result of this reference.

No. 521 ORDER THEREON, 24th May 1862, No. 1,152.

The Director of Public Instruction submitted on the 29th November 1861 his Budget Estimate for 1862-63, which will be incorporated in the Local Funds Budget now under preparation. It is presumed that the Accountant General has been supplied with a similar document by the Director. To save time however a copy will be forwarded to that Officer.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 522. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 1st May 1862, No. 285/N 120.—

SIR,

1. Government on the 24th November 1857, in Order No. 2,163, sanctioned an expenditure, on estimate of Rupees 8,930, for constructing ten Tunnels on Trunk Road No. 6 in the Nellore District. Finding that, under peculiar local circumstances it would be expedient to substitute a road dam for one of these Tunnels, the Acting District Engineer applied for permission to effect the alteration; and this was accorded by the Chief Engineer under date 26th September 1860, upon an estimate amounting to Rupees 1,860, or somewhat less than the sum* allotted to the Tunnel thus superseded.

1 Letter from Captain Mullins, No. 680.
2 Do. from Captain Ritherdon, No. 80.
1 Comparative statement.

* (Rupees 1,930.)

2. The work was proceeded with, and is now completed, with the exception of the rough stone apron which requires, in the opinion of the District Engineer, greater strength than has been assigned to it in the original proposal. But the amount of the expenditure is unfortunately found already to be in excess of that of the estimate, according to Bills already submitted, to this Office, by Rupees 729, while there yet remains work to be done to the Apron, which is evidently indispensable, and which will, in the judgment of the District Engineer, cost Rupees 150 more.

3. The total excess therefore will amount to Rupees 879, and it is for this sum, supplemental to the original estimate, that sanction is now solicited. In the meantime as the dam which has been constructed is apparently in danger of being undermined if a heavy fall of rain should take place while the apron is in an incomplete state, I have authorized Captain Mullins to go on with the work in anticipation of Government according their approval of this course.

4. The causes assigned for the excess adverted to are detailed at length in the accompanying letters No. 680, dated 7th April 1862, from Captain Mullins, and No. 80, dated 24th March, from Captain Ritherdon. They comprise descriptions of loss of masonry work by floods, and of additional expenditure through increase of building rates, through the necessity which became apparent for giving greater stability to the dam than had been originally contemplated, and through bad management on the part of Subordinate Executive agents. As regards this

latter item, however, it is to be remarked that as out of the three individuals cited in Captain Ritherdon's letter,† only the native Sub-Overseer Armogum Mudelliar is at present in the public service (Assistant Overseer Maddox having resigned in December last, and Verkiah having been dismissed,) and as only one-fourth of the loss due to "want of care" is attributed to him, it will scarcely be considered worth while to take further action.

† No. 80.

5. The amount for which sanction is now solicited, viz., Rupees 879, could be allotted from the Reserve Fund of 1862-63.

No. 523. ORDER THEREON, 26th May 1862, No. 1,153.

1. Under the circumstances stated in the District Engineer's letter, the Government sanction from the Reserve Fund of the current year, the additional sum of 879 Rupees required for the completion of the road dam, in lieu of the tunnel originally provided for, on the 93rd mile of Trunk Road No. 6, in the Nellore District, the authorized outlay for the dam having been 1,860 Rupees.

2. The circumstances which have called for the additional expenditure are satisfactorily explained; but the likelihood of the estimate being exceeded must have been foreseen, and according to the rules of the Department should have been immediately reported, in view to a supplemental grant being sanctioned for the prosecution of the work. From Captain Mullins' letter, the neglect to do so appears to rest with Captain Ritherdon, the Range Officer, whose explanation the Government agree with the former in viewing as unsatisfactory. Captain Mullins very properly points out that the substitution of the dam having been authorized by the Chief Engineer on the understanding that it would not cost more than the tunnel, such authorization lapsed on its being discovered that the estimate was likely to be exceeded, and an order of Government became then absolutely necessary.

3. It is further to be observed that (1,860+879=) 2,739 Rupees does not represent the full cost of the dam; for two considerable items, viz., metalling, and rough stone groynes, have been carried out at an expense of (259+58=) 317 Rupees, and charged to the road repair allowance, a wholly unauthorized proceeding, which has raised the actual cost of the work to 3,056 Rupees, or 64 per cent. in excess of the estimate. The course adopted by the Deputy Chief Engineer and reported in the third paragraph of his letter is approved.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 524. Read the following Proceedings of the Madras Government in the Revenue Department, dated 19th May 1862, No. 1,097:—

Sanctioning the entertainment of a Surveyor and four Lascars for surveying properties on the Neilgherry Hills, and requesting Chief Engineer to supply them the necessary instruments.	(Vide Revenue Proceedings, 19th May 1862, Nos. 333-334.)

No. 525. ORDER THEREON, 26th May 1862, No. 1,154.

1. Communicated to the Chief Engineer and to the Deputy Chief Engineer, Southern Circle, for information.

2. The Chief Engineer's attention is requested to paragraph 5 of the Orders in the Revenue Department.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 526. Read the following Proceedings of the Madras Government in the Revenue Department, dated 19th May 1862, No. 1,101:—

Requesting the Board of Revenue to pay the parties whose lands are likely to be submerged by Irrigation and Canal Company's Canal, and instruct Mr. Minchin to use every effort to grant land in exchange from Government waste and resort to money compensation when land is not procurable. } (Vide Revenue Proceedings, 19th May 1862, Nos. 341-342.)

No. 527. ORDER THEREON, 26th May 1862, No. 1,155.

Communicated to the Consulting Engineer Irrigation and Canal Company, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 528. Read the following Proceedings of the Madras Government in the Military Department, dated 17th May 1862, No. 1,803:—

Requesting Revenue Department to cause the Collector to institute preliminary enquiries in accordance with the terms of Act VI of 1857, as to the extent of land to be acquired for the accommodation of the Battery of Artillery stationed at Waltair; as also the Quarter Master General to report whether the Harness room and other buildings are still required irrespective of the above proposition. } (Vide Military Proceedings, 17th May 1862, Nos. 375 @ 379.)

No. 529. ORDER THEREON, 26th May 1862, No. 1,156.

Communicated to the Deputy Chief Engineer, Northern Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 530. Read the following Proceedings of the Madras Government in the Financial Department, dated 19th May 1862, No. 376:—

Communicating copy of a letter from the Government of India to the Civil Paymaster, replying to certain questions in connection with the pay of Officers proceeding to Europe on Medical Certificate. } (Vide Financial Proceedings, 19th May 1862, Nos. 80-81.)

No. 531. ORDER THEREON 26th May 1862, No. 1,157.

Communicated to the Chief Engineer and to the Deputy Chief Engineers Northern, Southern and Central Circles, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 532. Read the following Proceedings of the Madras Government in the Judicial Department, dated 19th May 1862, No. 806:—

Sanctioning the construction of a new Kitchen, &c., to the Bungalow in Tunkum, Madura, and requesting that orders may be issued as to the source from which the cost of the work may be met. } (Vide Judicial Proceedings, 19th May 1862, Nos. 134-135.)

No. 533. ORDER THEREON, 26th May 1862, No. 1,158.

1. Communicated to the Deputy Chief Engineer, Southern Circle, for information and guidance.

2. The work will be executed from the General Funds of the Madura District for 1862-63. The rent derived from the building is received by the District Engineer as a portion of his allotment and cannot be expended in excess of that amount.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Proceedings of the Madras Government, Public Works Department, 1245

26th May 1862.

No. 534. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 17th May 1862, No. 722:—

SIR,

2 Papers containing subjects of Examination for Candidates for employment in the Public Works Department as Assistant Engineers.

1. In accordance with order of Government, No. 676 of 4th April 1862, regarding the tests to which Military Officers, who are Candidates for the Department of Public Works, should be subjected before they are permanently appointed thereto, I have the honor to report in the form required as follows.

First.—With all deference to the opinion of the Right Honorable the Governor General in Council that a period of probation should precede the examination for appointment, I beg to observe that the nature of the examination for the Department Public Works is such that a young Officer could not prepare for it if his time and attention were at all occupied, as they necessarily must be, with the execution of Public Works during his probationary service. Probationary service was tried in Madras and dispensed* with as unnecessary where an Assistant Engineer is required to pass a proper examination prior to his appointment.

* Proceedings of Government, No. 393, 27th February 1861.

Second head.—This question cannot be satisfactorily answered concisely, but paper A attached, contains the existing regulations on the subjects of examination, and the degree of proficiency required, and I would not recommend any alterations therein except what are shown in red ink.

Third head.—The existing mode of examination appears to be suitable in all respects. The papers are prepared by the Principal of the Civil Engineeering College, a numerical value being assigned to each, and the Candidate for appointment is required to obtain a minimum number of marks in each subject, and on the aggregate of the whole, to entitle him to a Certificate of qualification.

Fourth head.—The Principal of the Civil Engineering College should usually prepare the examination papers and superintend the examination at the Presidency, while the District or Executive Engineer of the Station would superintend the examination of Candidates up-country on papers sent from the Civil Engineering College.

Fifth head.—The system of examination described under the third head gives Officers every facility for examination and ensures equality of standard.

Sixth head.—A first Department is about to be formed in the Civil Engineering College for Officers and other gentlemen. In it they will have every facility for attaining the required standard of qualification. The Class is to open on the 1st of August next, and the Officers who are Candidates for admission to it are to undergo an Entrance Examination in the course of this month. I am informed by the Principal of the College that ten Officers have registered their names for the entrance examination, the nature of which is such as to ensure the same extent of knowledge in Mathematics as is possessed by Civilians in the same Class, all of whom are required to be Matriculated Students in the Madras or some other University. Paper B attached, shows the existing test in the Vernacular language for a Candidate for appointment as an Assistant Engineer and I would not propose any alteration in it.

No. 535. ORDER THEREON, 26th May 1862, No. 1,159.

Communicated to the Military Department, with reference to the Orders in that Department, No. 1,103, dated 25th March 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 536. Read the following Endorsement of the Chief Engineer, dated Chepauk, 7th May 1862, No. 230.

Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, dated Chepauk, 1st May 1862, No. 257/G 168 :—

SIR,

1. With reference to your Endorsement No. 13,014, calling for information regarding amount realized by the sale of rejected anchors, &c., of Blyth's Steam Tugs, I have the honor to inform you that Major Stoddard, in reply to an application for the same made under date 30th November 1861, replied, that it will be reported when the fitting up of the "Godavery" (Steamer) now in hand is completed.

28th April 1862.

2. A further communication is this day made to him on the subject.

Submitted to Government for information, with reference to the Memorandum from the Deputy Secretary to Government in the Public Works Department, No. 57, dated 17th April 1862.

1 Original letter No. 257, dated 1st May 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 537. ORDER THEREON, 26th May 1862, No. 1,160.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 538. Read the following Endorsement of Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 3rd May 1862, No. 290K 100 :—

Submitting to Government the Irrigation Registers of the Kurnool District for Faslis 1261 to 1265 (1851 to 1855.) These documents were sent back by Government in Proceedings No. 2,494, dated 23rd November 1858, for alteration, and they have been detained so long in the District Offices, that, although, there are still a few trifling deficiencies which might be remedied, it is not considered expedient to risk further delay by a second reference.

No. 539. ORDER THEREON, 26th May 1862, No. 1,161.

The Register will be returned to the Acting Deputy Chief Engineer, Northern Circle, for adoption. The deficiencies referred to should be supplied in the Register for the ensuing five Faslis.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 540. Read the following Proceedings of the Madras Government in the Judicial Department, dated 19th May 1862, No. 804 :—

Sanctioning the estimate for making a good masonry floor to the large enclosure used as a general Privy at the Penitentiary. } (Vide Judicial Proceedings, 19th May 1862, Nos. 130-131.)

No. 541. ORDER THEREON, 26th May 1862, No. 1,162.

1. Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

2. The work will be carried out from the Repair Funds of the Presidency District for the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 542. Read the following Proceedings of the Madras Government in the Revenue Department, dated 29th April 1862, No. 915 :—

Communicating letter from the Government of Bombay forwarding copy of a Report on North Canara by Colonel Turner and Mr. H. Hope, with their orders thereon. } (Vide Revenue Proceedings, 29th April 1862, Nos. 389-390.)

No. 543. ORDER THEREON, 26th May 1862, No. 1,163.

Communicated to the Acting Deputy Chief Engineer, Central Circle, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 544. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Madras Engineers, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 15th May 1862 :—

SIR,

I have the honor to solicit from Government the favor of being permitted to obtain from the Chief Engineer's Stores such Levelling and Mathematical instruments and Drawing materials as can be spared, and from the Superintendent of Stationery a few sundries which I shall require on first starting the East India Irrigation Company's works at Orissa. Prompt payment will be made for all such articles as may be supplied.

No. 545. ORDER THEREON, 26th May 1862, No. 1,164.

Under the conditions specified in this letter, the Government grant authority to the Chief Engineer and Superintendent of Stationery to supply Lieutenant-Colonel Rundall with the articles referred to therein.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 546. Read the following Endorsement of the Acting Deputy Chief Engineer, Southern Circle, dated Chepauk, 9th May 1862, No. 321.

Read the following letter from Captain W. C. PALMER, Acting District Engineer, Trichinopoly, to the Deputy Chief Engineer, Southern Circle, dated Trichinopoly, 1st May 1862, No. 7 :—

SIR,

1. In accordance with instructions in Proceedings, No. 12,990 of the 28th April, I have the honor to submit the following report on the condition of the Salem road.

2. At the Iyar bridge four of the six arches have been turned and three uncentred. The two last arches have been delayed by the necessity of passing water through the bridge from the Cávery for the irrigation of land under the Perivalay, and the foundation of the pier has given much trouble as a large block of old masonry had to be removed, and the boulders of loose stone met with below the surface prevented the use of wells. The percolation of water has been very great, but on my inspection of the work the day before yesterday, the excavation had been carried down to 7 feet, and 10 feet in one place below the bed of the stream, and Mr. Ricketts hoped to have the whole lower course of rough stone laid in by yesterday, and I expect to be able to open the bridge for traffic by the 1st June.

As reported in paragraph 4 of letter No. 2,145, dated 14th April 1862.

3. On the new gravelling estimate, material has been collected for 13 out of the 15 miles; on the 2 miles where stone jelly was allowed, it has been spread and the road is in very good order, but I cannot spread the gravel on the remaining portion of the road until rain falls, as if I do so, the gravel will be crushed into dust and wasted.

4. The traffic on the road from late Returns amounts to 608 bandies a day, and this has cut up the road in places, but as soon as rain falls and enables the material collected along the whole line to be spread, the road will be placed in very good order.

Submitted to Government,* with reference to and in continuation of letter from this Office, No. 12,990, dated 28th April 1862, with reference to the condition of the road between Salem and Trichinopoly in the latter District.

* 1 Letter from District Engineer, Trichinopoly, No. 7, dated 1st May 1862.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Southern Circle.

No. 547. ORDER THEREON, 27th May 1862, No. 1,165.

Recorded, with reference to Proceedings, No. 1,141, dated 24th May 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 548. Read the following Endorsement of the Acting Deputy Chief Engineer, Northern Circle, dated Chepauk, 8th May 1862, No. 296' Kr 126.

Read the following letter from Major J. C. ANDERSON, District Engineer, Kistna, to Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Northern Circle, dated Bezwadah, 1st May 1862, No. 1 :—

SIR,

1. Referring to the entry No. 120 in the Budget for 1862-63, under the head A as per margin, I have the honor to report that labor is so scarce in the Palnad, the tract which No. 7 Trunk Road traverses, that if the commencement of the repairs is deferred it is questionable whether they can be carried out to the extent contemplated during the year.

Rupees 5,000, Trunk Road No. 7.

2. Not more than 500 Rupees a month can be spent on the road, and I would solicit sanction to proceed with the repairs at this rate, on the understanding that in the event of the Supreme Government not increasing the assignment for the year, the expenditure will have to be defrayed from the amount allotted to the District from the existing assignment.

3. The late order of Government No. 744, dated 12th April 1862, would seem to indicate that the maintenance of the line of road under consideration is of some importance for local as well as for general traffic.

1 Letter from District Engineer, Kistna, No. 1, dated 1st May 1862.

The accompanying letter from the District Engineer, Kistna, No. 1, dated 1st May 1862, is submitted to Government with a recommendation that a grant of Rupees 5,000 may be made from the Reserve Fund for expenditure on Trunk Road No. 7 in 1862-63, in pursuance of order of Government No. 275, dated 20th February 1862.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Northern Circle.

No. 549. ORDER THEREON, 27th May 1862, No. 1,166.

Recorded with reference to Proceedings of Government No. 1143, dated 24th May 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 550. Read the following letter from Lieutenant-Colonel S. O. E. LUDLOW, Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 19th May 1862, No. 308 N 101:—

SIR,

1 Letter from the District Engineer, Nellore, No. 912, dated 6th May 1862, with two enclosures.

1. With reference to paragraph 7 of Colonel Ouchterlony's letter No. 272, dated 17th April 1862, I have the honor to forward one from the District Engineer Nellore, submitting an application for the grant of a gratuity of Rupees (24) twenty-four to Ruskala Lutchmiah, the Cooly therein reported to have been so injured at the Anicut Works as to necessitate the amputation of his leg.

2. This man who it appears from the Register of gratuity herewith forwarded, had been employed as a driver of a Railway truck for about eight years, is represented by the District Engineer to be not entirely helpless, and the accident which he met with was caused by his own carelessness, his plea for a gratuity is not therefore of a very strong character; but considering the serious nature of his loss and the reasons given in favor of the claim by the District Engineer in paragraph 2, I beg to recommend that the gratuity of (24) twenty-four Rupees be sanctioned.

No. 551. ORDER THEREON, 27th May 1862, No. 1,167.

As it is clear from the foregoing letter and its enclosures that the accident which happened to Cooly Ruskala Lutchmiah on the 6th February last was caused by his own carelessness, the Government consider that he cannot strictly claim a gratuity. Considering, however, the serious nature of his loss, and the strong recommendations of the Deputy Chief Engineer, Northern Circle, and the District Engineer Nellore on his behalf, the Government will not object to award him the usual compensation, and they accordingly authorize the payment to him of Rupees 24, being the amount of his wages for six months.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 552. Read the following Memorandum from the Acting Deputy Chief Engineer, Central Circle, dated Chepauk, 20th May 1862, No. 801.

Read the following letter from Lieutenant-Colonel H. W. HITCHINS, District Engineer, Presidency, to the Deputy Chief Engineer, Central Circle, dated Madras, 17th May 1862, No. 187:—

SIR,

1. With reference to your Memorandum No. 485 of the 13th instant, calling for information as to what steps have been taken regarding the new buildings at the Gun Powder Manu-

factory, I have the honor to inform you that an agreement has been entered into with a Native Contractor, Soomoo Chetty, for the supply of seven lacs of bricks of a superior description, none being procurable in the market, to be supplied at the rate of 15,000 per diem, commencing from the 1st of August next.

2. The preparation of the concrete was commenced about two months ago, in fact as soon as I could make arrangements for bringing the Mills at the Cement Factory into working order, and it is proceeding vigorously; the excavation and laying of the foundations can be commenced almost immediately.

3. The brickwork can only be built to a height of about 15 inches from the foundation before the engines arrive, as parts of the iron work have to be built in with the masonry at that height, so that the engines can hardly arrive too soon, and it is very possible I think that we may be kept waiting for them. It is impossible to say how long the erection of the buildings may take, as they are altogether of a novel character, but you may rest assured that no exertions will be spared by this Department to expedite their progress.

1 Original letter No. 187, dated 17th May 1862.

Submitting to Government for information, with reference to Government Proceedings No. 434, dated 13th March 1862, letter No. 187, from the District Engineer Presidency, dated 17th May 1862.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Ag. Dy. Chief Engineer, Central Circle.

No. 553. ORDER THEREON, 27th May 1862, No. 1,168.

Communicated to the Military Department for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 554. Read the following letter from M. KRISTNIAH, late a Sub-Overseer, Department Public Works, Nellore District, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Madras, 6th May 1862.

RESPECTED SIR,

1. I beg leave most respectfully to approach you with these few lines in the humble hope of being pardoned for the intrusion herein taken.

2. I beg to state for your information that I was in August 1847, first engaged as a Maramut Muddutgar in the Hoozoor Kacheri of the Rajahmundry Collectorate on a salary of 15 Rupees per mensem, as will be seen by the accompanying Hookoom* from Mr. Thomas Prendergast, the then Collector. On the 1st December 1853, I was promoted to 18 Rupees salary, and on the 1st January 1854 I received a further promotion which raised my salary to 20 Rupees.

* Marked A.
Vide Hookooms from the same Collector, marked B and C.

3. When the new Department Public Works was organized, I was transferred to the Engineer's Department of the Godavery Division, as per Captain Rundall's Official Memorandum† of the 26th September 1857. In September 1858 I was at my own request transferred to the Nellore District.

† Marked D.
See Mr. R. Smith's Memo. dated 13th September 1858, marked E.

4. After my transfer to the Nellore District, I was first employed in the Northern range, where I obtained good testimonials from Lieutenant Marshall the Officer in charge of the Range as well as from Mr. Assistant Overseer O'Connor, under whose immediate orders I was employed. I was afterwards transferred to the Nellore Range and placed under the orders of the Assistant Overseer C. Plunkett, who, in due appreciation of my services, gave me a testimonial.

See Testimonials marked F and G.
Marked H.

5. Unfortunately for me, I was transferred to the southern range of Lieutenant Smith, who, I regret to say, has from time to time, been writing against me to the District Engineer; and

Captain Greenaway, except in one instance, did not cause any enquiry to be made, and when I found that I was not safe under Lieutenant Smith I very often applied to the District Engineer to be transferred to another range, but in vain.

6. In August 1861, Lieutenant Smith wrote to the District Engineer to say that he did not require my services at all, when Captain Mullins transferred me to the Nellore Range where I was doing duty till October 1861 without any complaint from Captain Ritherdon or my other superiors. At about the latter end of October 1861, my services were placed under Mr. Sage, who was transferred to the Godavery District on the 13th November 1861. I understand that this gentleman also made an unfavorable report against me, which led to my dismissal from employment.

See Captain Ritherdon's Memo. marked I.

7. Respected Sir, from the above it will be seen that after a service of 15 years in the old and new Maramut Departments I have been deprived of my situation, solely, I may say, on the exertions of Lieutenant Smith, whilst all others under whom I served have all borne favorable testimony as to my steadiness and usefulness in business.

Marked J.

8. I beg to enclose a copy of the Conduct Register furnished to me by the District Engineer; the several remarks therein made are founded upon the reports made by Lieutenant Smith, but there is one point which clearly elicits that Officer's evil disposition to me, *i. e.*, though I was transferred from his Range in August 1861, yet on the 9th September 1861, he appears to have reported to the District Engineer regarding my unfitness even for a Gumáshta's place, as will be seen from a remark made in the Conduct Register to that effect by Captain Mullins.

9. Finding that there was no prospect of any redress to be got from the District Engineer, I left my family and children at Nellore and came down to Madras to appeal to the authorities here. The result of my appeals to the Deputy Chief Engineer of the Northern Circle and the Chief Engineer, will be known by perusing documents marked K and L.

10. Respected Sir, I and my family are suffering great distress, having lost our only means of livelihood, and I have no other alternative left than to implore mercy from your benevolent hands. You are aware, Sir, that, according to the orders of Government, persons dismissed from one Department will not be entertained in another, but after serving Government for the space of 15 years, I really know not where to go and seek for employment. I therefore most respectfully and earnestly beg that you will, in kind and generous consideration of being an old servant of Government, be pleased to remove the restriction by which I am precluded from holding any small appointment in any other Department of service, so that I and my family may secure some means of livelihood or otherwise we will be put to miserable shifts in this transitory world, and as under the Lord's blessings *it is in your power* to alleviate the same, I earnestly beg that my case may receive your kind and favorable consideration. My sad and unfortunate case is now before you and in the hope that you will not withhold your kindest consideration to it, I venture with this humble appeal before you and very respectfully trust my prayer will be heard and answered. Sir, I will add no more than my earnest desire that God will put it into your heart to pity my case and favor me with redress.

No. 555. ORDER THEREON, 27th May 1862, No. 1,169.

As from the papers submitted by the Petitioner, no moral culpability appears to attach to him, and considering his length of service (15 years) and that previous to April 1860 he afforded satisfaction to his superiors in the Public Works Department, the Government will not object to his being re-employed in any other branch of the service, but they cannot exempt him from passing the Uncovenanted Service Examination.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 556. Read the following letter from C. B. SAUNDERS, Esq., Officiating Commissioner for the Government of the Territories of His Highness the Maha Rajah of Mysore, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works, Department, Fort Saint George, dated Bangalore, 19th April 1862, No. 15 :—

" SIR,

I have the honor to acknowledge the receipt of your letter No. 743 of the 12th instant, and in reply to enclose for the information of His Excellency the Governor in Council, copy of a letter from the Chief Engineer in Mysore, dated the 17th instant, No. 4,143, conveying the information required, regarding the Máuri Cunvai Reservoir.

No. 557. ORDER THEREON, 27th May 1862, No. 1,170.

Ordered that the following letter be despatched to the Commissioner of Mysore :—

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 558. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Department, Public Works, Fort Saint George, to the Commissioner for the Government of the Territories of His Highness the Rajah of Mysore, dated 27th May 1862, No. 1,171.

SIR,

1. I am directed by His Excellency in Council to acknowledge the receipt of your letter of the 19th April last, enclosing copy of one from Colonel Lawford, and to observe that as that Officer only partially replies to the questions contained in the latter part of the first paragraph of my letter of the 12th ultimo, this Government hope you will favor them with a copy of your Chief Engineer's report in which the details of the scheme are sketched out, as though doubtless good provision has been made to guard against accidents, and means can be devised of accommodating all interests, yet in their opinion it would be only in accordance with the views of the Secretary of State as expressed in the latter part of the 2nd paragraph of his Despatch of the 24th November 1859, that this Government should have the opportunity of knowing the particulars of the arrangements proposed, especially as the Provinces affected by the work in question are both under British jurisdiction.

No. 743.

2. I am directed further to observe that the present project, as explained in Colonel Lawford's letter, appears to be identical with that originally contemplated, and on which the Special Commissioners appointed by the Government of India were directed to report, but as Colonel Lawford states that information, elicited subsequently to the Report of the Commissioners, " on the point most affecting the consideration of the question" shows that the conclusions previously arrived at were incorrect, this Government would be glad to be favored with that information also.

No. 559. Proceedings of the Madras Government, dated 27th May 1862, No. 1,172.

Read Indent on the Chief Engineer by his Assistant, dated 14th May 1862, for certain articles for use in the Store Department, valued at Rupees (255-5-11) two hundred and fifty-five, Annas five and Pice eleven :—

No. 560. Sanctioned.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 561. Read the following Proceedings of the Madras Government in the Ecclesiastical Department, dated 20th May 1862, No. 155 :—

Sanctioning the estimate for enclosing with a wall and protecting the Burial Ground near Fort Saint David in South Arcot. } (Vide Ecclesiastical Proceedings, 20th May 1862, Nos. 19-20.)

No. 562. ORDER THEREON, 27th May 1862, No. 1,173.

Communicated to the Chief Engineer and to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 563. Read the following letter from J. J. FRANKLIN, Esq., Superintendent of Marine, to Lieut.-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Madras, 19th May 1862, No. 1,477 :—

SIR,

1. In the Proceedings of Government of the 28th ultimo, No. 845, a letter from the Acting Accountant General was communicated to me, wherein he stated that Treasury orders were no longer necessary for the pay of the Pier establishment, but that the Bills should be sent to the Civil Paymaster for audit.

2. I have the honor to inform you that this course was followed in respect to the Abstract for April last, but that it has been returned this day with the Memorandum attached, explaining that Treasury orders will still be required pending receipt of the authority of the Supreme Government to the employment of the establishment, and of sanction to the Budget estimate for 1862-63.

3. Under these circumstances I solicit a Treasury order for the amount of the Abstract Rupees 182-8-0.

4. The amount collected as toll during April was Rupees 150-8-0.

No. 564. ORDER THEREON, 27th May 1862, No. 1,174.

A Treasury order for Rupees 182-8-0 will accordingly be issued for the payment of the Pier establishment in arrears for the month of April 1862, subject to the charge being passed by the Audit Office on the Financial Budget for the current year receiving the sanction of the Government of India.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 565. Read the following letter from Lieutenant-Colonel W. K. WORSTER, Barrack Master Presidency, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Fort Saint George, 6th May 1862, No. 39 :—

SIR,

With reference to the Order of Government of the 3rd May 1862, No. 941, on a communication from the District Engineer, I have the honor to state that there appears to be no objection to this Department undertaking the supply of and repairs to Punkahs, and it would be advantageous to the interests of Government, in my opinion, if a Carpenter is attached permanently to this Department to attend to all minor repairs immediately they are required, as well as to locks, fixtures, &c., as at present applications are very frequent to the Executive Department which most necessarily interrupt the routine of the Engineer's Workshops.

No. 566. ORDER THEREON, 27th May 1862, No. 1,175.

* 12th March, No. 446.

1. In 1858* the Government, on the recommendation of the then Chief Engineer, agreed that the putting up and repairing of punkahs and other fixtures in public buildings should be performed without the intervention of the Public Works Department, the object being to prevent the cost of such works forming a debit against that Department.

2. In consequence of the Barrack Master not having adequate establishment to undertake the work, the Government assented in their Order No. 1,599, dated 12th August 1858, to the Acting Chief Engineer's proposition, that at the Presidency the above duty should be transferred to the Civil Architect and Garrison Engineer so far as respects the buildings under their respective charges.

3. In March 1859 it was represented by the then Chief Engineer that, owing to the duty of designing, hanging and supplying punkahs in the several Districts having been entrusted to non-professional men, the practice established by the order of March 1858 had not been attended with benefit to the State. These orders having already been reversed in the case of the Presidency the Government in Proceedings marginally noted authorized it, modification to the extent proposed as respects the Provinces also.

No. 860, dated 12th April 1859.

4. On the 25th April 1862 the Acting Deputy Chief Engineer, Central Circle, represented that at up-country stations it would no doubt be desirable that professional aid should be given in designing, constructing, and hanging punkahs, but that in the Presidency, where there is a Barrack Master to superintend, and numerous Carpenters and Cabinet makers competent to do the work, the time of the Engineer Officer in responsible situations should not be occupied with such trifles. Colonel Hitchins, to show how trifling the requisitions made on his Department in respect to Punkahs were, brought as an example a case which recently occurred, where the Brigade Major sent him a Punkah Puller's Billet to be painted and numbered.

5. The Acting Deputy Chief Engineer's letter was forwarded to the Barrack Master for report. Colonel Worster in his reply above recorded states that there will be no objection to his undertaking the work, but suggests that it would be advantageous to Government to have a Carpenter permanently attached to his Department.

6. The Government have considered the matter, and are of opinion that the transfer should be made; but they do not see the necessity for allowing a Carpenter permanently to the Barrack Master's Department, especially at Madras where plenty of artificers are available for daily hire. The Deputy Chief Engineer will issue instructions accordingly, and so relieve the District Engineer from all duties in connection with the designing, constructing, repairing, and hanging of Punkahs at the Presidency.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 567. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 23rd May 1862, No. 888:—

SIR,

I request to be informed whether I am at liberty to authorize the Presidency District Engineer to proceed with operations for widening and improving the General Hospital Gate Bridge and that of the Elephant also, as solicited in the accompanying letter from that Officer.*

* No. 169, dated 15th May 1862.

No. 568. ORDER THEREON, 27th May 1862, No. 1,176.

The Acting Deputy Chief Engineer, Central Circle, is informed that the District Engineer Presidency is at liberty to proceed with the works† mentioned in this letter from the General Funds at his disposal for the current year, pending the receipt of the advance on the one per cent. Income Tax of 1861-62 promised in the Memorandum from the Government of India on the current year's Budget, regarding which orders were passed in Proceedings No. 1,150, dated 24th May 1862, these works being provided for from this source.

† Estimates Rupees 17,200 and 15,330, marked B in the Budget for 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 569. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 12th May 1862, No. 448 :—

SIR,

With reference to the requisition in the Proceedings of Government, No. 752, dated the 12th April 1862, I have the honor to state that the passing of the Bills referred to therein was detained until complete Bills for the Dredger and Punts detailed in the Return submitted to Government were received and passed, because the former works were undertaken from the advances taken up for the dredger and Punts, and it was desirable that the whole should be adjusted at one time, so that credit might be taken for the whole amount of these advances which were all held to the debit of the "Chief Engineer" for work done at the Presidency Stores and Workshop at Abercrombie's Battery.

No. 570. ORDER THEREON, 28th May 1862, No. 1,177.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 571. Read the following letter from Lieutenant-Colonel J. CARPENDALE, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 16th April 1862, No. 12,764 :—

SIR,

1 Letter from District Engineer Bellary, dated 24th March 1862, No. 518, with three accompaniments.
1 Do. to Civil Paymaster, dated 3rd April 1862, No. 12,246.
1. Do. from do., dated 10th April 1862, No. 143.

1. I have the honor to submit for the orders of Government papers as per margin, relative to the rate of salary which it is considered Captain Flint is entitled to from the 1st February 1862, and to a retrenchment made by the Civil Paymaster on account of salary overdrawn by that Officer from the 28th April to the 27th October 1860.

G. O. G., dated 13th April 1860, page 820.
* 28th April 1860.

Vide Civil Paymaster's letter, dated 5th January 1861, No. 7.

2. Captain Flint was appointed to act as 2nd Assistant District Engineer Bellary, *vice* Captain Babington in April 1860, and was allowed to draw from the date* of his joining the appointment up to the 27th October 1860, an allowance of Rupees 100 per month under Rule 4, Section II, Chapter XV of the Bengal Public Works Code, after which he drew the full salary of 2nd Assistant District Engineer until the end of January 1862, when, in consequence of his being gazetted† Acting 2nd Assistant District Engineer *vice* Captain Syme employed on special duty in the Wainad

† "Fort Saint George Gazette," dated 24th January 1862, page 156.

consequent upon Lieutenant H. M. D. Prendergast being appointed 2nd Assistant District Engineer *vice* Captain Babington for whom Captain Flint had previously been acting, his salary was reduced by the Civil Paymaster to Rupees 75 per month, on the grounds that as it was a fresh appointment, and that, as Captain Flint held no substantive post in the Department, no more than a moiety of a 2nd Assistant District Engineer's salary could be passed to him except under the special sanction of Government although the full salary of the post is available.

3. This sanction, I beg leave to recommend, may be accorded, and I respectfully submit that the question requires a general decision for guidance in all future cases. The Civil Auditor's opinion is certainly agreeable to the wording of G. O. G. dated 23rd July 1858, page 161, "Fort Saint George Gazette;" which says, that an Officer acting for another is not entitled to full staff pay until he has performed the duties of the appointment for six months. If the wording had simply been, that an Acting Officer was not entitled, &c., &c., until he had performed the duties for six months, the objections would be got rid of, as in the present case Captain Flint has performed the duties for nearly two years; and I cannot help thinking that that reading has the original intention, and that it never could have been intended, that an Officer who had established a right to the full salary of an appointment by six month's service, should afterwards fall to half allowances merely from Departmental arrangements regarding the location of Officers, while no extra expense is caused to the State.

4. As respects the retrenchment, the Civil Paymaster states that at the time the higher allowance of Rupees 100 per month was passed to Captain Flint, he was of opinion that the Section of the Bengal Public Works Code applied to Captain Flint's case; but that he has recently discovered that such was a mistake, and that Captain Flint was only entitled to Rupees 75 per month from the 28th April to the 27th October 1860, and was accordingly bound to make the necessary retrenchment.

5. This proceeding on the part of the Civil Paymaster may be quite correct, but as he had declared in January 1861, that Captain Flint was entitled to Rupees 100 per month, it appears to me that under a *pre audit* system the amount should not be subsequently retrenched, as it is evident that it must be a serious inconvenience and disappointment to Officers to have to refund money a year after they are authoritatively told that they are entitled to it.

No. 572. ORDER THEREON, 28th May 1862, No. 1,178.

1. There are two points submitted in this letter for the orders of Government, viz. :—

I. A retrenchment of Rupees 149-4-4 against Captain Flint, being the difference of pay between 75 and 100 Rupees a month from 28th April to 26th October 1860, during which period he acted as 2nd Assistant District Engineer of Bellary, without holding any substantive appointment in the Department.

II. The ruling of the Civil Paymaster that Captain Flint is only entitled to 75 Rupees a month, or the moiety of 150, from the 24th June 1862, on which date he was appointed Acting 2nd Assistant District Engineer in Bellary in the room of Captain Syme posted to the Wainád, on the ground that it was a fresh appointment, although Captain Flint had been previously employed as an Acting 2nd Assistant District Engineer in the same District for more than the prescribed period.

2. In respect to the first point, the Civil Paymaster is correct according to the Rules, as an Acting Officer cannot draw any more than half the salary of an appointment, even though more may be available, until he has served for six months therein. The retrenchment passed against Captain Flint must therefore hold good.

3. On the second point, the Government find that Captain Flint had not only qualified for full salary by six months' service as Acting 2nd Assistant, but that he had actually rendered near two years continous service in that capacity, and in the same District; and it would be very hard that, owing to Departmental arrangements, he was re-appointed in the same capacity in the room of another Officer, he should consequently fall to half allowances, especially when it was intended, as Government understand from the Chief Engineer, to make Captain Syme's full salary availa-

ble for Captain Flint, the former being wholly paid from a separate source. Under these circumstances, and as no extra expense will be caused thereby to the State, the Government sanction the full salary of 2nd Assistant District Engineer, viz., 150 Rupees a month, being passed to Captain Flint from the 20th January 1862, the date on which Captain Syme's full salary became available.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 573. Read the following Memorandum from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, in charge of Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 14th May 1862, No. 56:—

1. The Acting Deputy Chief Engineer in charge of Southern Circle, regrets to have to report for the information of Government that he has this day received by Telegraph intelligence of an accident which has befallen the Kulputty bridge in the Malabar District, involving the destruction of five arches.

2. An excessive flood on the 10th instant is the cause alleged, and further particulars are promised by post.

No. 574. ORDER THEREON, 28th May 1862, No. 1,179.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 575. Read the following Endorsement of the Deputy Chief Engineer, Northern Circle, dated Chepauk, 14th May 1862, No. 303/K 56:—

Read the following letter from Captain J. BEATTY, Acting District Engineer of Kurnool, to Lieutenant-Colonel J. OUCHTERLONY, Deputy Chief Engineer, Northern Circle, Chepauk, dated Kurnool, 8th May 1862, No. 28.

SIR,

1. It is with much regret I have the honor to report the occurrence, on the 5th instant, of an unseasonable and very high, if not extraordinary, fresh in the river Kunderu, which has occasioned the loss of three completed and two incompleted arches and damage to two of the piers of the new bridge now in progress near Nundial.

2. The two incomplete arches were the eighth and ninth commenced out of the seventeen arches of which the bridge is to consist, and the three completed were the next three in succession to them. The piers which gave way were those on which the thrust of the sixth and seventh, both completed arches, bore, and of course failed immediately on the fall of the adjoining centrings.

3. I had not relied on the strength of the piers to bear such a shock, as they were not of the best material or workmanship, but was preparing, by means of a small side arch of stone in chunam which would eventually have formed part of the tenth centring, and intended to bear part of the tenth arch, to counteract the thrust of the ninth (during the freshes) on the intermediate pier, and had this very unexpected fresh not occurred there was little doubt that the whole would have been completed and secure by the 15th or 16th of this month, before which I had every reason to believe from careful enquiry made on the spot some months since that there was no probability of a fresh of more than two or three feet occurring, and against such a small fresh I was prepared; and I was also particularly anxious to take full advantage of this working season, owing to the extent to which the work had been delayed in the early part of the year while the Range was under Mr. Corran's and Mr. Hasler's care, as already reported.

4. I am unable to state from the meagre information I have received what the probable cost of repairing the damage done will be, and will defer this till after a careful inspection of the work, for which purpose I propose starting to the Kunderu to-morrow, and will, on my return, report further.

5. The archwork at the bridge will now, of necessity, be stopped till the end of the freshes about the middle of November, but in the meantime I shall go on collecting and preparing materials and hope to be ready to complete the arches early in the next dry season.

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1 Letter from District Engineer, Kurnool, No. 28, dated 8th May 1862.

1. Submitted to Government for information.

2. The District Engineer, Kurnool, has been called upon to explain the cause of the work not having been executed of the best materials and workmanship.

3. On receipt of the above information and the report promised in the 4th paragraph of Captain Beatty's letter the same will be forwarded for the information of Government.

4. Captain Beatty has been requested to adopt any measures that may be necessary to secure the remaining arches and prevent further damage to the work.

(Signed) S. O. E. LUDLOW, Lieut.-Colonel,
Deputy Chief Engineer, Northern Circle.

No. 576. ORDER THEREON, 28th May 1862, No. 1,180.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 577. Read the following letter from Lieutenant-Colonel S. O. E. LUDLOW, Deputy Chief Engineer in charge of Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 20th May 1862, No. 798:—

SIR,

2 Letters from the District Engineer, Nos. 197 and 217, dated 27th March and 30th April 1862.

	RS.	A.	P.
Road from Tindevanum to Cuddalore by Xylam	98	15	8
Do. from Cuddalore to Trunk Road No 8	76	15	6
Do. from Mercanum to Chenganum	300	0	0
Total	475	15	2

1. I have the honor to report, for the information of Government, that the District Engineer of South Arcot expended a sum of Rupees 475-15-2 on the three roads noted in the margin, in excess of their annual maintenance grants. These roads having been much injured during the last monsoons extra materials had to be procured for their repair, which, coupled with the fact of the insufficiency of establishment for the conservancy of the line from Chenganah to Mercanum, rendered the additional outlay absolutely necessary. I therefore solicit that Government will be pleased to sanction the amount, viz., Rupees 475-15-2, already disbursed from the General Repair Funds of the South Arcot District for the past official year.

* Rupees 475 15 2
† „ 1,000 0 0

2. I beg to observe that the amount* now applied for is in addition to that† sanctioned under the head "communication," in Proceedings of Government, No. 48, dated 22nd January 1862.

3. As it appears from those repeated excesses of expenditure that the maintenance allowance for those roads is insufficient, I have called upon the District Engineer to furnish a report on the subject, and an estimate which will cover the cost of repairs without necessitating such frequent application to Government for additional grant.

No. 578. ORDER THEREON, 28th May 1862, No. 1,181.

As it appears that the sum of Rupees 475-15-2, referred to in this letter, was expended during the past official year the sanction of Government thereto is unnecessary. Bills for the works accompanied by full explanations of the causes of excess in each case should however be submitted without delay.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 579. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 13th May 1862, No. 473:—

SIR,

1. I have the honor to report for the information of Government that the District Engineer requested sanction on the 3rd of April 1862, to re-plaster a portion of the north-east demi Bastion of Fort Saint George in consequence of injury which it had sustained in raising and lowering materials for the works under repair generally, and that although the plastering was not provided for, it could be met from the estimate, in which there had been a saving owing to authorized alterations since its preparation. In reply I requested the District Engineer to consider the expediency of using a superior kind of plaster for the Fortifications, as I had noticed that much of what was only 18 months' old was already rapidly falling off; and I at the same time suggested to him the desirability of making a much more extensive trial than it had yet had of Ransome's Patent Process for preserving stone.

1 Letter from the District Engineer Presidency, No. 2,838, dated 3rd April 1862.
1 Do. No. 3,026, dated 26th April 1862.

2. The District Engineer in his letter herewith submitted, admitted the necessity of improvement in the quality of the plaster, though he does not expect that the substitution of stone for shell lime in its preparation will cause it to be more durable. He estimates the plastering of the north-east demi Bastion in the usual way at Rupees 868, but I am very sanguine that plaster made of stone lime will be found much more lasting, and I recommend that the repair of north-east demi Bastion may be done in that style, at a cost not exceeding Rupees 1,200 as an experiment. If it is found that plaster made from stone lime is much more durable, the additional expenditure of about 50 *per cent.* in the first outlay will after all be economical.

No. 3,026, 27th April 1862.

3. In regard to Ransome's Patent Process, I find that the reports made to the Right Honorable the Secretary of State were not favorable, and that no further supply of the material was applied for. I observed recently an experimental brick wall in the Fort to which this material had been applied two and a half year's ago, and it appeared to me that from the condition of the brick work after that lapse of time that the material was highly deserving of an extensive trial, and I beg leave to recommend that a sufficient quantity to cover ten thousand square feet may be indented for on the Home Government; and that when it is received it may be tried upon new brickwork without the previous application of any plaster.

No. 580. ORDER THEREON, 28th May 1862, No. 1,182.

1. The cost of re-plastering 24,800 square feet of the north-east demi Bastion of Fort Saint George, at 3½ Rupees per square, is estimated by the District Engineer at 868 Rupees, and he calculates that to substitute stone chunam for the ordinary shell chunam will cost quite double that sum, *i. e.*, 1,636 Rupees. The Deputy Chief Engineer however in suggesting the desira-

bleness of using a superior description of plaster, recommends the employment of stone for shell lime at a cost not exceeding 1,200 Rupees as an experiment. Before Government can pass orders on this application therefore an estimate for plastering the Bastion with stone lime should be called for from the District Engineer and laid before them.

* 9th May and 17th October 1861, Nos. 351 and 6,033.

2. The Government have referred to the reports* furnished by the Chief Engineer of the results of the trial by the District Engineers Presidency, Malabar and Ganjam, of the solution patented by Mr. Ransome; but they do not see sufficient encouragement to apply to England for a further supply of the fluid cement in order to make an extended trial of the process.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 581. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 6th May 1862, No. 195:—

SIR,

1 Original Memorandum.

1. I have the honor to submit, for the information of Government, the accompanying Memorandum from the Secretary to the Board of Examiners, reporting that the following Officers of the Public Works Department, who presented themselves at the last examination in the Vernacular, have failed to pass the required standard, viz.:—

Captain Syme, 2nd Assistant District Engineer, on special duty in the Wainád.

Mr. R. E. Fraser, Probationer, 1st Class, Civil Engineering College.

2. Under paragraph 5 of the Proceedings of Government, dated 8th March 1861, No. 471, Captain Syme has become subject to deduction of 10 per cent. from his Civil salary, and I have requested the Deputy Chief Engineer, Southern Circle, to call upon him to show reason why the penalty should not be inflicted in his case.

3. As respects Mr. Fraser, his attention will be directed to the Proceedings of Government, dated 13th December 1861, No. 2,295, ruling that, in the event of his failing to pass the prescribed examination in the Vernacular within six months from that date, his appointment would be revoked under the concluding sentence of his Covenant. This period will expire next month, but as I am doubtful whether the above ruling of Government can be carried into effect under the terms of his Covenant, I have applied to the Government Solicitor for an opinion on the subject, which will be laid before Government when received.

4. Captain F. J. Moberly, District Engineer of South Canara, was prevented from appearing for examination in consequence of his transfer to the Madras District.

5. Mr. Brosnahan did not appear, owing, the District Engineer of Malabar reports, to important works in progress under his charge, preventing him from proceeding to Coimbatore for the purpose. This is the third time that Mr. Brosnahan has failed to appear for examination when arrangements for the purpose had been made, and the Board of Examiners and myself are much dissatisfied with his conduct in the matter. On the first occasion of his being warned to attend for examination, the measures taken by the Board for the purpose were set aside in consequence of his declining, in the first instance, to comply with the request of Mr. Nesbit, the Acting Judge at Ootacamund, to appear before him and the Collector, because he had no orders to do so from Mr. Ward the Civil Judge at Coimbatore, by whom it was originally intended he should be examined.

Vide Chief Engineer's Proceedings, dated 10th December 1861, No. 8,162.

6. On the second occasion he did not attend for examination owing to his not receiving the usual notice in sufficient time, and in this case therefore he was not to blame; on the third occasion he expressed himself unable to go to Coimbatore for the purpose of being examined

owing, as above explained, to the importance of the works entrusted to his charge, and to his being at the time on his way to Yennamackul to superintend the Dam works. These reasons cannot be considered as sufficient in my opinion, for the District Engineer states, that he did not in any way recommend Mr. Brosnahan not to appear at the quarterly examination, but even supposing they were sufficient, still he should, as remarked by the Board of Examiners, in common courtesy to the gentlemen appointed to examine him, have intimated to them his inability to attend for his examination, and I have requested the District Engineer of Malabar to inform him so.

7. The names of the Officers who passed successfully the prescribed examination were notified in the "Fort Saint George Gazette" of the 17th April 1862, page 620, and are also given in the margin.

Lieutenant Pennycuick, Engineers ...	Tamil full test.
Captain A. G. Burns, Acting 1st Assistant District Engineer, Coimbatore...	Tamil, colloquial test.
Captain C. G. Philipps, 1st Assistant District Engineer, Ganjam ...	Telugu do.
Captain A. D. Clay, 1st Assistant District Engineer, Salem ...	Tamil do.

No. 582. ORDER THEREON, 28th May 1862, No. 1,183.

1. The Government will await the receipt of the opinion of the Government Solicitor on Mr. Fraser's case, which the Chief Engineer states has been referred to him.

2. The Government have had occasion very recently to animadvert on the proceedings of Mr. Brosnahan, 2nd Assistant District Engineer, Malabar. The present letter of the Chief Engineer contains another instance in which that Officer has evaded the instructions of his superiors on a plea which is altogether inadmissible.

3. Mr. Brosnahan should be informed that unless he takes immediate steps to comply with the Rules of the Department, as respects passing the required examination in the Vernacular, without which he cannot be thoroughly efficient as an Executive Officer, the Government will be under the necessity of dispensing with his services under the terms of his Covenant.

4. The Government observe that Captain Syme's case is now under the consideration of the Chief Engineer.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 583. Read the following Proceedings of the Madras Government in the Financial Department, dated 13th May 1862, No. 357:—

Referring for consideration letter from the Accountant General, suggesting that the estimate of the cost of the establishment at Cochrane's Canal can be met from the Budget head "E, Works of Internal Improvement."	(Vide Financial Proceedings, 13th May 1862, Nos. 43-44.)

No. 584. ORDER THEREON, 28th May 1862, No. 1,184.

1. As suggested by the Acting Accountant General, the Government authorize the cost of the Cochrane's Canal establishment, amounting annually to Rupees 2,094, being debited to the excess provision made in the Budget of the current year for Travellers' Bungalows and Native Choultries, &c., under the head "E. Works of Internal Improvement."

2. That part of Mr. Lushington's letter, wherein it is observed that the Revenue Department, in transmitting the revised Budget, did not allude to the charges struck out by it, will be referred to that Department.

3. Due provision for the Canal establishment should be made in next and future years' Budgets.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 585. Read the following Proceedings of the Madras Government in the Military Department, dated 9th May 1862, No. 1,707:—

Requesting that the Bill for the improvements and alterations of the room allotted as a Veterinary Pharmacy at the Remount Depôt, Oossoor, may be adjusted. (Vide Military Proceedings, 9th May 1862, Nos. 209-210.)

No. 586. ORDER THEREON, 28th May 1862, No. 1,185.

The Deputy Chief Engineer, Southern Circle, will be so good as to issue the necessary instructions to the District Engineer Salem, to disburse the amount* of the Bill referred to in paragraph 2 of the Order in the Military Department from the General Funds at his disposal for the current year.

* Rupees 214-4-6.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 587. Read the following letter from Lieutenant-Colonel S. O. E. LUDLOW, Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 23rd May 1862, No. 311/Gm 7:—

SIR,

In continuation of Colonel Ouchterlony's letter No. 199, dated 10th March 1862, I have the honor to report for the information of Government, that the Tahsíldár's Kacheri at Chicacole, in the District of Ganjam, was completed on the 28th February 1862.

No. 588. ORDER THEREON, 28th May 1862, No. 1,186.

Communicated to the Revenue Department for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 589. Read the following Endorsement of the Chief Engineer, dated Chepauk, 17th May 1862, No. 701.

Read the following letter from Lieutenant-Colonel H. W. HITCHINS, District Engineer, Presidency, to the Deputy Chief Engineer, Central Circle, dated Madras, 7th May 1862, No. 87:—

SIR,

1. I have the honor to request that you will be pleased to forward to the Chief Engineer the accompanying letter from Lieutenant Pennycuick, who requests that his appointment as Acting 2nd Assistant District Engineer, Presidency, may be antedated to the 4th ultimo.

2. He joined this Office on that day under the idea that he would have been gazetted the same evening, and as Lieutenant Wood relieved Lieutenant Tulloch as Acting 1st Assistant on the 2nd ultimo, I was only too happy to avail myself of Lieutenant Pennycuick's services when he told me he was to be appointed to act for Lieutenant Wood.

3. However, as his appointment was not made until the 8th ultimo, I should not have brought the subject to your notice, but unfortunately his privilege leave expired on the 6th idem, and so to obviate all further reference, I have the honor to recommend that Lieutenant Pennycuick's appointment be antedated to the 4th ultimo, the date on which he assumed charge of his office.

From Lieutenant J. PENNYCUICK, Madras Engineers, Acting 2nd Assistant District Engineer, Presidency, to Lieutenant-Colonel H. W. HITCHINS, District Engineer, Presidency.

SIR,

1. With reference to the enclosed Memorandum from the Paymaster, Presidency, I have the honor to bring to your notice the fact that although my appointment to act as 2nd Assistant District Engineer at the Presidency was not published in the Gazette until the 8th ultimo, I have in point of fact been doing the duty since the 4th, on which date I had expected it would appear in the Gazette. The appointment was in fact vacant for some days previous to this, Lieutenant Wood having taken over charge of the office of 1st Assistant some time before. I did not think it worth while to take any notice of this at the time as I was under the impression that I had not left Dowlaishwaram till the 8th February, and that consequently my privilege leave would not expire until the 8th April. I now find, however, that the Certificate furnished by the Station Staff Officer at Dowlaishwaram gives the 6th February as the date of my departure from that Station, and that the Paymaster refuses in consequence to pass my pay and allowances for the 7th and 8th.

2. If it should be found that my appointment to this Department cannot be antedated to the 4th ultimo, I beg to request that the leave granted to me by His Excellency the Commander-in-Chief in the Gazette of the 4th ultimo should be made to commence on the 7th instead of the 9th April so as to enable me to draw my pay for the 7th and 8th.

3. At the same time I beg to request that the remainder of the above leave may be cancelled; my object in applying for it was to enable me to study in order to pass in Tamil for this Department, which I did not then consider myself able to do; as however, I passed the full test on the 3rd April, there is no longer any occasion for me to make use of the leave.

(True Copy.)

(Signed) H. W. HITCHINS, Lieut.-Colonel,
District Engineer, Presidency.

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1 Original letter No. 87, dated 7th May 1862, with one enclosure.

1. Submitted to Government with the Chief Engineer's recommendation that under the circumstances represented by the District Engineer, Presidency, the appointment of Lieutenant Pennycuick to act as 2nd Assistant District Engineer *vice* Lieutenant Wood may be antedated to the 4th April 1862.

2. Lieutenant Pennycuick passed the prescribed examination in the vernacular on the 3rd April 1862, and as Lieutenant Wood relieved Lieutenant Tulloch of his duties as 1st Assistant District Engineer on the 2nd idem and Lieutenant Pennycuick entered upon those of 2nd Assistant on the 4th idem, there appears to be no objection to the arrangement above recommended.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Chief Engineer.

No. 590. ORDER THEREON, 28th May 1862, No. 1,187.

The Government accede to the Chief Engineer's recommendation, and direct that a notification antedating Lieutenant Pennycuick's appointment to 4th April 1862 be published in the "Fort Saint George Gazette."

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 591. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 12th May 1862, No. 425:—

SIR,

1. I have the honor to forward an estimate, amounting to Rupees 2,500, for annual repairs to the roads of Fort Saint George.

2. A sum of Rupees 2,500 for the above works has already been sanctioned by Government for entry in the Budget of 1862-63 on an approximate calculation, and I now only request the formal sanction of Government to the enclosed estimate, which has undergone the usual examination in this Office.

No. 592. ORDER THEREON, 29th May 1862, No. 1,188.

The estimate amounting to Rupees 2,500 submitted with this letter is sanctioned, provision for the same having been made in the Budget for the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 593. Read the following Proceedings of the Madras Government in the Military Department, dated 9th May 1862, No. 1,689:—

Approving of the estimate for constructing a Powder Magazine for the use of the Artillery stationed at Bellary. } (Vide Military Proceedings, 9th May 1862, Nos. 180-181.)

No. 594. ORDER THEREON, 29th May 1862, No. 1,189.

1. Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

2. The amount sanctioned, viz., Rupees 480, will be provided from the Reserve Fund of 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 595. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 13th May 1862, No. 474:—

SIR,

1. With reference to the Proceedings of Government No. 224, dated 15th February 1862, I have the honor to report for their information that of the two boats therein ordered to be sold by auction, one only, viz., passenger boat, was sold to the highest bidder for Rupees 132, and that the cargo boat was only bid for as high as Rupees 72, and that Mr. Kennedy, who superintended the sale, thought it proper not to part with it for so paltry a sum, as its original cost was Rupees 2,800, and its timbers are worth much more than the bid made to Government for other purposes. In bringing the circumstance to the notice of this Office he suggested that the timber could be usefully applied for the repair of ferry boats, &c.

1 Letter from the Officiating District Engineer, Madras, No. 2,507, dated 8th April 1862.
1 Do. No. 2,622, dated 29th April 1862.

2. The Acting District Engineer, Madras, was thereupon requested to state what he would value the timber at, if ordered to be broken up, and what boats it could be used in repairing. To this requisition Mr. Kennedy replied that it is worth at least 200 Rupees after paying all the expenses that may be incurred in breaking it up, and that the material could be economically used in the repair of ferry boats on the Canal for the use of the villagers, and which are kept in repair at the cost of Government.

3. Under these circumstances I beg to support Mr. Kennedy's suggestion, and request that the permission of Government may be granted for breaking the boat up and using the timber for repairs.

No. 596. ORDER THEREON, 29th May 1862, No. 1,190.

Under the circumstances stated, the Government approve of the suggestions contained in paragraph 3 of this letter.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 597. Read the following Endorsement of the Officer in charge of the Audit and Account Departments, dated Chepauk, 14th May 1862, No. 549.

Read the following letter from W. S. HARINGTON, Esq., 1st Assistant District Engineer, in charge of Madura District, to Major H. W. RAWLINS, in charge of the Audit and Account Departments, Madras, dated Madura, 3rd May 1862, No. 17 :—

SIR,

1. With reference to your Memorandum No. 11,391 of 11th March 1862, communicating the Government Order No. 364 of 6th idem, I have the honor to state that the crane was originally intended to be used in raising large stones for the revetment works of the Anenia-poorem and Anoopanady tanks, estimates having then been prepared for their repair ; these works have however, not been carried on account of the insufficiency of the rates for stone.

2. I am however, of opinion that the crane may be used with advantage on these or other works at some future period and its cost be then charged to those works.

One original letter from the District Engineer of Madura, dated 3rd May 1862, No. 17.

Submitted to Government, with reference to their Proceedings of the 6th March 1862, No. 364.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In charge of the Audit and Account Departments.

No. 598. ORDER THEREON, 29th May 1862, No. 1,191.

Under the explanation now afforded, the Government sanction the Bill for Rupees 60, submitted with the letter marginally noted, from the Officer in charge of the Audit and Account Departments of the Central Office. The amount will now be debited under the head " Stores of the Public Works Department," which will be relieved of the charge on the value of the Crane being recovered hereafter from works on which it may be used.

No. 10,935, dated 27th February 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 599. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 24th April 1862, No. 12,908:—

SIR,

1. I have the honor to forward herewith a Bill amounting to Rupees 245, for the construction of a Cable shed at Autunkarray for the Telegraph Department.

1 Bill
1 Letter from District Engineer Madura, dated 25th January 1862, No. 1,416 with one enclosure.
1 Do. do. 18th March 1862, No. 1,698, with four enclosures.

2. The work was completed in May 1861, but from Captain Hankin's report, accompanying the District Engineer's letter of the 25th January 1862, No. 1,416, it appears that the work has been so badly executed as to render its entire re-construction necessary.

3. From the explanations which were called for, and which accompany this letter, it will be seen that the party principally responsible was Mr. Drane (since dead) the Overseer whose Certificate is attached to the Bill, declaring that he had examined the work from time to time during its execution, and found it completed in all particulars in accordance with the estimate.

4. The District Engineer considers that Mr. Dudgeon, who succeeded to the charge of the Range, and to whom fell the duty of submitting the bill is culpable also, but seeing the work had been finished previous to his arrival and the necessary certificate had been furnished by his predecessor, I do not myself see that blame attaches to Mr. Dudgeon.

5. The contract under which the work was executed appears defective, and this is one of the difficulties attendant on the contract system, for, as has been recently seen, parties will not undertake work under penalty clauses, and if such are omitted, there is no guarantee but that of supervision that the work will be honestly carried out; in so small a work as the one under reference, the expense of such supervision would nearly equal the cost of the work.

6. Under the circumstances I see no alternative but to request that the Bill may be passed as from the certificate of discharge given to the Contractor, no money can possibly be recovered from him, and the Overseer who fnisurhed that certificate is no longer alive.

No. 600. ORDER THEREON, 29th May 1862, No. 1,192.

1. This Bill for constructing a Cable shed at Autunkarray for the Telegraph Department in Madura, is submitted to Government, it is presumed, with reference to the latter part of Section 13 of Chapter IV of the new Code, head "Chief Engineer."

2. This is a work for which the Telegraph Department offered to find funds, the Public Works Department being only asked to do the work. In submitting the Bill, it is stated that the work has been so badly executed, that it will have to be done over again. The contract however was defective, while the Contractor has been discharged by a certificate granted by Mr. Drane who superintended the work, and who is since dead.

3. Under these circumstances and as there appears no alternative but to pass the charge, the Bill is sanctioned. If the money which has been spent upon the work was advanced by the Telegraph Department according to engagement, it is but fair that a proper building should now be constructed for that Department out of the Public Works funds; but if the money was paid from the latter source, the funds necessary for the new building should be drawn from the Telegraph Department in order that a double charge on the Public Works funds may be avoided. A report will be ultimately made to show how the accounts of the transaction have been squared.

4. The date of the Government Order, viz., 8th December 1859, No. 2,854, sanctioning the work should have been quoted at the head of the Bill instead of the Chief Engineer's Proceedings, dated 24th October 1860, which simply called for a report on the termination of the work.

5. The Government observe that Mr. Dudgeon, who succeeded Mr. Drane, should have inspected the building before sending in the Bill.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 601. Read the following Proceedings of the Madras Government in the Judicial Department, dated 21st May 1862, No. 821 :—

Sanctioning the estimate for building a District Munsif's Court House at Carangooly. } (Vide Judicial Proceedings, 21st May 1862, Nos. 152-153.)

No. 602. ORDER THEREON, 29th May 1862, No. 1,193.

1. Communicated to the Acting Deputy Chief Engineer, Central Circle, for information and guidance.

2. A grant of Rupees 2,500 will be made from the Reserve Fund of 1862-63 for the work in question.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 603. Read the following Endorsement of the Acting Deputy Chief Engineer in charge of Southern Circle, dated Chepauk, 13th May 1862, No. 508.

Read the following letter from Captain E. A. FOORD, District Engineer, to the Deputy Chief Engineer, Southern Circle, dated Negapatam, 2nd May 1862, No. 3 :—

SIR,

1. Referring to Proceedings of Government, No. 67, dated 28th January last, which accompained your Order No. 10,208, dated 4th February, I have the honor to inform you that the sum of Rupees 3,000, sanctioned as advance for fitting up the Dredges at Negapatam, is almost exhausted, and to request therefore that a further advance may be obtained, or that I may be permitted to proceed with the completion of the Dredges in anticipation of sanction of the estimates forwarded by Captain Oakes with his letter No. 310, dated 26th February last.

2. I beg also that you will be good enough to inform me how soon I may expect to receive the new spur wheel for the large Dredge, and the feed pump for the smaller Dredge now being made in Madras, in lieu of the broken ones returned from this District.

1. Communicated to Government with a request that a further grant may be authorized of Rupees 3,000, for expenditure in fitting up the Dredge at Negapatam, in order that the work in question may not be delayed. The amount to be allotted from the sum appropriated to "Marine" in the Budget of 1862-63, Part II.

1 Original letter No. 3, dated 2nd May 1862.

2. The estimate called for in paragraph 2 of Government Order No. 67, dated 28th January 1862, has been received in this Office from the District Engineer, and will be submitted in due course.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Southern Circle.

No. 604. ORDER THEREON, 29th May 1862, No. 1,194.

1. The Government grant authority for a further advance of Rupees 3,000 being made from the source mentioned in the Endorsement of the Deputy Chief Engineer, Southern Circle, for the fitting up of the Negapatam Steam Dredge.

2. The estimate referred to in paragraph 2 should be submitted without delay.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 605. Read the following letter from Lieutenant-Colonel R. STRACHEY, Secretary to the Government of India, Public Works Department, to the Secretary to the Government of Madras, Public Works Department, dated Fort William, 30th April 1862, No. 1,576 :—

SIR,

1. I am directed to request that you will furnish a return, as per annexed Memorandum, giving the latest information available, and specifying the date to which the return is correct.

2. It is requested that early attention may be given to this call.

MEMORANDUM.

A.

Total number of Officers employed in Public Works Department (Engineer Establishment); showing separately—

(1) Number of Engineer Officers,
(2) „ of Staff Corps and other Military Officers not Engineers,
(3) „ of Civilians,

and to be arranged according to departmental grades.

The above to include all Officers in Public Works employ, whether in Secretariat, Control of Railways, or other similar works, Accounts, Forest, or Executive charges.

B.

Total number of Engineer Officers; showing separately—

(1) Number as above in Department Public Works.
(2) „ in other Departments; specifying them.
(3) „ in Military employ.
(4) „ on leave in India.
(5) „ „ in England.

C.

Total number of Upper Subordinate Establishment; showing—

(1) Number of Military Subordinates originally enlisted as Sappers,
(2) „ of ditto otherwise enlisted,
(3) „ of Civil Subordinates,

and arranged according to departmental grades.

D.

Total number of European Sapper Soldiers, including men removed to the Unattached List or Warrant grades; showing—

(1) Number in Public Works Department.
(2) „ in other Deprrtments; specifying them.
(3) „ in Military employ.
(4) „ on leave in India.
(5) „ „ in England.

No. 606. ORDER THEREON, 29th May 1862, No. 1,195.

1. Communicated to the Chief Engineer, who will submit the information called for in parts A. B. and C. of the accompanying Memorandum. The Return under part A. should include

Officers employed in the Public Works Secretariat and control of Railways. In compiling the Return required under part C, the Chief Engineer will communicate with the Commandant of Engineers.

2. Information under the heads given in part A of the Memorandum, relative to the Officers employed in the Survey and Forest Departments, will be called for through the Revenue Department.

3. The Military Department will be requested to obtain and submit the information required in part D of the Memorandum.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 607. Read the following Circular from Lieutenant-Colonel A. G. GOODWYN, Under Secretary to the Government of India, Public Works Department, to the Secretary to the Government of Madras, dated Fort William, 28th April 1862, No. 32:—

Circular Memorandum, by the Honorable E. DRUMMOND, Officiating Secretary to Government of India, Financial Department, No. 2,464, dated 31st March 1862.

1. His Excellency the Governor General in Council observes that, in most instances, applications for additional grants to the Budget are sent in, without its being stated in them to what heads of service those grants appertain; and in not a few cases, they are, when sanctioned, classified differently in the Financial Department and the different Offices of Account concerned. The consequence is that the Registers of additional grants kept in the Offices do not agree, and much confusion ensues.

2. With a view to prevent this confusion, His Excellency in Council directs that every Officer applying for a grant subsequent to the sanction of the General Annual Budget shall invariably specify in his application the class of service for which the grant is required.

3. The Financial Department will, after approval or correction, if necessary, of the classification given, note the Budget head in its orders, intimating sanction of the charge to the Auditor General of India and the Deputy Auditor and Accountant General concerned.

4. Whenever doubts are entertained as to the correctness of the classification adopted by the Financial Department, such doubts must at once be communicated to that Department by the Auditor General, or by the Deputy Auditor and Accountant General concerned, through the Auditor General, with a view to the correction of the classification if necessary.

Copies to the several Departments, Governments, Administrations, Auditor General, Accountant General, and the several Deputy Auditors and Accountants General.

Governments of Madras, Bombay, Bengal, N. W. P., and Punjaub.
Chief Commissioner, Oudh, Central Provinces, and British Burmah.
Governor, Straits Settlements.
Commissioner, Mysore.
Resident, Hyderabad.
Governor General's Agents, Rajpootana and Central India.

Copy forwarded for guidance to the Local Governments and Officers marginally noted.

No. 608. ORDER THEREON, 29th May 1862, No. 1,106.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 609. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 10th May 1862, No. 420:—

SIR,

1. I have the honor to report that, of the balance outstanding in the books of this Office against the North Canara District under the head "Advances for District Stores," the District Engineer cannot account for a sum of Rupees 15-13-6; and from the annexed extracts of letters from and to the District Engineer on the subject, it will be seen that that Officer is unable to explain the deficiency. I beg therefore to recommend that the amount may be written off to "Profit and Loss" account.

2. With the exception of the above sum, the District Engineer has accounted for all the advances which were outstanding, as well as the cash in hand, on the occasion of the transfer of the North Canara Districts by receipts from the Bombay authorities.

Extract of a letter from the District Engineer North Canara, to Deputy Chief Engineer, No. 63, dated 10th July 1861.

Paragraph 1. I have the honor to forward herewith the memoranda of outstanding advances, and of machinery, called for in Circular No. 184 of 4th April. These have been prepared with great care, and tally correctly with the Range Returns, but there is a discrepancy of Rupees 15-13-6, between the total amount of outstanding balance and that shown in the District accounts; I am not at present able to explain this, but cannot detain these returns any longer while examining into the matter.

From Deputy Chief Engineer, to District Engineer North Canara, No. 5,137, dated 21st September 1861.

Paragraph 4. As respects the difference of Rupees 15-13-6, referred to in paragraph 1 of your letter of the 10th July, I beg you will use every endeavour to trace it out at an early date and report the particulars of the same to this Office.

From District Engineer North Canara, to Deputy Chief Engineer, No. 146, dated 12th November 1861.

Paragraph 6. I have been unable to trace out and account for the discrepancy alluded to in your 4th paragraph, owing to the protracted illness of my Head Accountant and general incompleteness of my Office, but the matter shall not be lost sight of, and further report will be made as soon as possible.

From District Engineer North Canara, to Deputy Chief Engineer, dated 11th April 1862.

Paragraph 6. * * * * * * * * * * * * * * * * * A third sum of Rupees 15-13-6, forming a discrepancy of old standing between the accounts of advances as shown in the District books and at Madras could not be charged against Bombay; and as I have lost all hope of being able to trace the error, I must suggest that the amount be written off to "Profit and Loss" account.

(True Extract.)

(Signed) F. H. RUNDALL, Lieut.-Colonel,
In charge of the Audit and Account Departments.

No. 610. ORDER THEREON, 29th May 1862, No. 1,197.

The Government grant authority for writing off to "Profit and Loss" the sum of Rupees 15-13-6 referred to in the foregoing letter from the Officer in charge of the Audit and Account Departments of the Central Office. They observe that with this exception Lieutenant-Colonel Walker has accounted for all outstanding advances as well as cash in hand on the occasion of the transfer of the Public Works in North Canara to the Bombay authorities.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 611. Read the following Proceedings of the Madras Government in the Public Department, dated 20th May 1862, No. 608 :—

Communicating Home Despatch, acquainting of the arrangements consequent on the absence of Sir Charles Wood from Town. } (Vide Public Proceedings, 20th May 1862, Nos. 104-105.)

No. 612. ORDER THEREON, 30th May 1862, No. 1,198.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 613. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer in charge of Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 20th May 1862, No. 778 :—

SIR,

1 Specification.
1 Abstract estimate.

1. I have the honor to submit herewith an estimate amounting to Rupees 160 for pulling down and re-building the Cable Shed erected at Attankurray, Madura District, which, as Government will have become apprized by letter No. 12,908, dated 24th April 1862, from the Audit and Account Department, was so badly constructed that its restoration has been found absolutely necessary.

2. The amount if sanctioned by Government must be allotted out of the Reserve Fund.

No. 614. ORDER THEREON, 30th May 1862, No. 1,199.

1. The estimate amounting to Rupees 160 submitted with this letter is sanctioned.

2. The Deputy Chief Engineer, Southern Circle, will be good enough to report whether the existing Shed was built from Public Works funds or from funds allotted by the Telegraph Department. On the receipt of this information, orders will be passed as to the source from which the amount of the estimate now sanctioned is to be obtained.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 615. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 19th May 1862, No. 749 :—

SIR,

1 Letter from Acting District Engineer Kurnool, dated 7th April 1862, No. 1,218.
1 Do. Colonel J. Ouchterlony, dated 17th April 1862, No. 217.
2 Forms of Indemnity Bonds.
2 Do. Deeds of Indentures.

1. I have the honor to submit for the orders of Government the accompanying papers relative to the course to be followed in the case of Candidates residing at the Presidency who may apply for employment in distant Districts as Apprentices.

Proceedings of Government, dated 11th May 1860, No. 977.
Do. dated 29th May 1861, No 1,003.

2. Under the rules several documents are required from a Candidate for Apprenticeship, which should be furnished prior to entertainment, and as in the case of those abovementioned it is desirable that they should be called upon to submit and execute the whole of their papers previous to leaving the Presidency, I recommend that the Deputy Chief Engineer of the Circle shall act for and on behalf of the District Engineer, on the latter intimating to the former Officer that he is willing to accept the applicant as an Apprentice under the rules of the Department above quoted.

3. The requisite corrections have been made by the Government Solicitor in the accompanying Forms of Indentures and Indemnity Bonds, and I request that the sanction of Government may be given to their adoption.

4. As respects the examination of such Candidates as those above referred to, the Principal of the Civil Engineering College is the proper Officer in my opinion to conduct the same, the examination papers being furnished to him for the purpose by the District Engineer.

No. 616. ORDER THEREON, 30th May 1862, No. 1,200.

1. Under the circumstances stated in paragraphs 1 and 2 of this letter, the Government sanction the adoption of the Forms of Indentures and Indemnity Bonds as revised by their Solicitor.

2. The Government concur in the opinion expressed by the Chief Engineer in paragraph 4.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 617. Read the following letter from Major J. WRAY, Acting Secretary to the Government of Bombay, Marine Department, to the Secretary to the Government of Madras, dated Bombay Castle, 30th April 1862, No. 335 :—

SIR,

I have the honor to subjoin an Extract, paragraphs 1 and 2, of a letter from the Commander-in-Chief, I. N., No. 296 of 19th April ; and to enquire whether the services of any of the Supernumerary Engineers on this Establishment, are required in the Madras Presidency :—

1. "Consequent on the reductions that have recenly been ordered both in the Indus Flotilla and in the sea-going Steam vessels, there will be a greater number of Engineers on the Establishment than we shall have occasion for."

2. "I therefore deem it right to bring the circumstance to the notice of your Excellency in Council, and to suggest that the Governments of Calcutta and Madras be informed thereof, so that if the services of Engineers are required at either of those Presidencies, they may be supplied from our Supernumerary List."

No. 618. ORDER THEREON, 30th May 1862, No. 1,201.

Ordered that the following letter be despatched to the Government of Bombay :—

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

Ordered that the following letter be despatched.

No. 619. From Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Department Public Works, Fort Saint George, to the Acting Secretary to the Government of Bombay, Marine Department, dated 30th May 1862, No. 1,202.

SIR,

In acknowledging the receipt of your letter No. 335, dated 30th April 1862, I am desired by the Honorable the Governor in Council to state that the Madras Government do not require the services of any of the Supernumerary Engineers on the Indian Navy Establishment referred to therein, as there is already a sufficient number of this class available for employment in this Presidency.

No. 620. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 12th May 1862, No. 451 :—

1 Bill and one Comparative Statement.
1 Letter to District Engineer North Arcot, 17th October 1861, No. 6,034.
1 Do. from do. 16th November 1861, No. 984, with two enclosures.
1 Do. to District Engineer Godavery, 18th December 1861, No. 8,488.
1 Do. from do. 2nd April 1862, No. 1,515, with one enclosure.

	RS.	A.	P.
First part bill sanctioned by Chief Engineer on 3rd September 1858	2,060	15	3
Final bill	264	15	11
	2,325	15	2
Amount of estimate	2,000	0	0
Excess	325	15	2

See accompaniments to letter from District Engineer North Arcot, dated 16th March 1861, No. 984.

SIR,

1. I have the honor to forward herewith the final Bill, amounting to Rupees 264-15-11, for the survey of the Nursapore Harbour. It consists of the value of articles supplied by the Workshop to Mr. Biggers, the Officer under whose superintendence the survey was carried out.

2. From the Comparative Statement accompanying the Bill, it will be seen that the excess has been chiefly in the item of "Sailing boat for taking soundings," with regard to which I beg to furnish the following explanation as the expenditure took place when I was District Engineer in the Godavery.

3. It was at first intended to supply him with a boat from the Workshop, but as it was wanted for use in the river and at the bar, and communication from the Canals into the river was not then open, it was thought more expedient that Mr. Biggers should build one for himself. He accordingly purchased the only one which was offered for sale at Nursapore for a small amount Rupees 100, and though old, it was then sufficiently good to answer the purpose required. It had to be coppered, and otherwise fitted with cabins, &c., so as to render it habitable for the Officer and crew who would have to live in it for days together.

4. After Mr. Biggers was removed to another District, and the survey suspended, the boat was brought round to Cocanada in order to be made of use there, but the Officer there, the late Mr. Tuke, after using it for some time returned it to the Dockyard for repairs. The original wood work of the boat was, however, found to be so much decayed as not to be worth the expenditure of more money, and, therefore, I directed such material in her, as was sound, to be used in working up other boats. This Bill I find was submitted to this office so far back as November 1860, since when a good deal of unnecessary correspondence has taken place. The estimate originally sanctioned, of which this Bill is an excess, *could* only be a conjectural one, and therefore the present Bill will, I trust, be passed upon the explanation above afforded.

No. 621. ORDER THEREON, 30th May 1862, No. 1,203.

Under the explanation afforded the Government sanction the Bill submitted with this letter, amounting to Rupees (264-15-11) two hundred and sixty-four, Annas fifteen and Pice eleven, for the survey of the Nursapore Harbour in the Godavery District.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 622. Read the following Endorsement of the Acting Deputy Chief Engineer, Central Circle, dated Chepauk, 22nd May 1862, No. 857.

Read the following letter from Lieutenant-Colonel H. W. HITCHINS, District Engineer, Presidency, to the Deputy Chief Engineer, Central Circle, dated Madras, 13th May 1862, No. 134 :—

SIR,

Nos. 373 and 929, dated 11th April and 2nd May 1862.

With reference to Extract from the Proceedings of the Madras Government as per margin, and your orders thereon No. 277, dated 8th instant, I have the honor to inform you that a new iron stink trap has been fitted in the cesspool of the drain in the yard of the Fort School, and that the cost of the trap is Rupees 61-9-6.

1 Letter from the District Engineer Presidency, No. 134, dated 13th May 1862.

1. Submitting to Government with reference to their Proceedings No. 923, dated 2nd May 1862, a letter from the District Engineer, Presidency, No. 134, dated 13th May 1862.

2. The Acting Deputy Chief Engineer, Central Circle, would recommend that the amount Rupees 61-9-6 therein reported to have been expended for fitting up a new iron stink trap to the cesspool in the Fort School, may be authorized from the Repair Fund at the disposal of the District Engineer, Presidency, for the current official year.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Central Circle.

ORDER THEREON, 30th May 1862, No. 1,204.

No. 623. The Government consider this application unnecessary. The work having been already executed in pursuance of the orders marginally noted, a bill for the expense incurred should have been submitted for sanction in the usual course.

No. 923, dated 2nd May 1862.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 624. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, in charge of the Audit and Account Departments, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 14th May 1862, No. 550:—

SIR,

1 Memorandum to District Engineer, No. 205, dated 1st September 1860.
1 Letter from do. No. 1,813, dated 5th September 1860.
1 do. No. 1,854, dated 10th do.
1 do. 14th April 1862, No. 746, with one enclosure.
1 Bill with voucher.

1. I have the honor to forward herewith a Bill, amounting to Rupees 298-3-1, for an engine shed constructed at the Engineer Workshops at Nellore.

See enclosure to District Engineer's letter, dated 14th April 1862, No. 746.

2. It will be observed from the District Engineer's letter of the 10th September 1860, No. 1,854, herewith sent, that no provision was made for housing the engine, in the estimate for the Workshop. The shed was erected under the authority of Captain Greenaway, who, as Captain Ritherdon reports, marked out the site, approved of the size of the room and of other arrangements. In the letter of the 10th September 1860, referred to above, Captain Greenaway reported to the Deputy Chief Engineer, Central Circle, that he proposed to incur the necessary expenditure in the completion of the shed, and to furnish with the Bill full explanation of the necessity of the outlay.

3. Captain Mullins explains that the shed "is a projection in rear of the new shop, so "arranged that the fly wheel of the engine is brought almost directly under the shafting which "communicates motion to the machinery. It measures 20′ × 10′ on plan and answers its "purpose fully."

4. As it appears that the shed does not add to the value of the engine, I request sanction to the Bill herewith submitted amounting to Rupees 298-3-1.

ORDER THEREON, 30th May 1862, No. 1,205.

No. 625. The bill submitted with this letter is sanctioned.

(Signed) W. H. HORSLEY, Lieut.-Colonel
Secretary to Government.

No. 626. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 13th May 1862, No. 472:—

SIR,

1. I have the honor to submit for the sanction of Government the following Estimates:—

(1.) For repairing the road way over the College Bridge.......... Rs. 385
(2.) Do. roads in St. Andrew's Church Compound.......... ,, 265

2. In the Budget of the current year Rupees 40 and 30 respectively are allowed for the ordinary repair of the abovementioned roads; but on personal inspection I find that they absolutely need the repairs which the accompanying estimates provide. I accordingly recommend that sanction may be accorded to them from the Reserve Fund.

3. On enquiry from the District Engineer I find that the sum of Rupees 2,555, provided in the Budget for the maintenance of roads over all Bridges and for roads in the Government Compound at the Presidency exclusive of Rupees 2,500 the repair of all the roads in the Fort, was estimated by him as sufficient for casual trifling repairs, and that he did not intend that it should be considered in supersession of the large sum which had always been found requisite for repairing roads at periods varying from one to three years, and on which account a large sum had always been available in the Budget until the current year. The District Engineer has reported that a sum of Rupees 6,268 annually would, in his opinion, be sufficient, but as he has arrived at that conclusion apparently from the data of one year only, I have requested him before bringing the question generally under the consideration of Government to ascertain what average for each piece of road the expenditure of the last five years would give.

No. 627. ORDER THEREON, 30th May 1862, No. 1,206.

Under the opinion expressed by the Acting Deputy Chief Engineer, Central Circle, after personal inspection of the Bridges referred to in this letter, the Government sanction the estimates submitted therewith, amounting in the aggregate to Rupees 650. The works will be proceeded with from the General Funds allotted to the Presidency for the current year.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 628. Read the following Proceedings of the Madras Government in the Revenue Department, dated 10th May 1862, No. 1,036:—

Passing orders on the Proceedings of the Board of Revenue, regarding the collection of the returns from and the management of the Irrigation and Canal Company's works. (Vide Revenue Proceedings, 10th May 1862, Nos. 215-216.)

No. 629. ORDER THEREON, 30th May 1862, No. 1,207.

Communicated to the Chief Engineer, Department Public Works, for information.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 630. Read the following letter from Lieutenant-Colonel S. O. E. LUDLOW, Deputy Chief Engineer, Northern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 15th May 1862, No. 307/U G 1:—

SIR,

I have the honor to forward a letter from Captain Haig soliciting permission to make an alteration in the arrangements connected with the management of the Transit operations on the Godavery, and to inform you that, as in paragraph 3 of Government Order No. 943, dated 3rd May 1862, His Excellency left the responsibility of working out his own scheme with Captain Haig, I have informed that Officer that he is at liberty to make the additional arrangement he proposes.

† Letter from the District Engineer Upper Godavery, No. 303, dated 30th April 1862.

No. 631. ORDER THEREON, 30th May 1862, No. 1,208.

Ordered to be recorded.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 632. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer in charge of Southern Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 14th May 1862, No. 539 :—

SIR,

1. I have the honor to submit herewith an Estimate amounting to Rupees 1,800, for constructing two Groynes of rough stone on the right bank of the Cauvery near the village of Vangul in the Caroor Range, Coimbatore District, to protect the Neroor Channel, which is represented to be in such danger through erosion of the river's bank, that in one place only a bar of ten feet of soil interposes between the bed of the river and that of the Canal.

1 Letter from District Engineer Coimbatore, No. 701, dated ... April 1862.
1 Plan.
1 Abstract Estimate.

2. Under these circumstances, and looking to the amount of Revenue* dependent on the Neroor Channel, Colonel Birdwood conveyed authority on the 7th instant, to the District Engineer to commence the groynes at once in anticipation of sanction by Government, lest the monsoon freshes of the river should come down before the work could be completed. This proceeding Government will doubtless approve.

* Rupees 13,993.

3. The amount if sanctioned can be allotted out of the District fund for current repairs, agricultural, amount Rupees 33,250 for 1862-63.

No. 633. ORDER THEREON, 30th May 1862, No. 1,209.

1. The estimate is sanctioned, the funds being provided in the manner stated in paragraph 3 of the above letter.

2. The proceedings of the Deputy Chief Engineer, Southern Circle are approved.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 634. Read the following Endorsement of the Acting Deputy Chief Engineer in charge of Southern Circle, dated Chepauk, 10th May 1862, No. 384.

Read the following letter from Captain W. C. PALMER, Acting District Engineer, Trichinopoly, to the Deputy Chief Engineer, Southern Circle, dated Trichinopoly, 30th April 1862, No. 2,272 :—

SIR,

1. In accordance with instructions in Proceedings No. 8,789 of the 24th December 1861, I have the honor to re-submit for sanction the estimate of Rupees 2,550, for constructing three surplus Sluices in the north bank of Coleroon near the Town of Lalgúdi, and to report that the amount of Revenue depending on the land in question is Rupees 9,313.

1 Estimate.

2. The survey, plan and specification were forwarded with letter No. 1,218 of the 16th November and are now in your Office, as they were not sent back with the Proceedings noted above returning the estimate.

From Æ. R. McDONELL, Esq., Officiating Collector of Trichinopoly, to Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Trichinopoly, 22nd November 1861, No. 209.

1 Plan.
1 Survey.
1 Estimate.
1 Abstract estimate.
1 Specification.
1 Letter.

SIR,

1. I have the honor to forward herewith countersigned an estimate for Rupees 2,550, for constructing three surplus Sluices in the north bank of the Coleroon, together with six enclosures* received from the Acting District Engineer, Captain Palmer.

2. The work is, in my opinion, very necessary.

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† Trichinopoly District.
1 Original letter from District Engineer.
1 Do. from Collector, No. 209, dated 22nd November 1861.
1 Report.
2 Plans.
1 Abstract estimate.

The enclosed estimate amounting to Rupees 2,550, for constructing three surplus Sluices in the north bank of the Coleroon near the town of Lalgúdi,† is submitted to Government with recommendation for sanction from the Reserve Fund of the current year, with reference to a letter from this Office, No. 8,789, dated 24th December 1861. The estimates have been duly countersigned by the Collector of Trichinopoly, who expresses an opinon that "the work is very necessary." Government will observe that the amount of Revenue dependent upon the cultivation affected is stated by the District Engineer to be Rupees 9,313.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Dy. Chief Engr. in charge of Southern Circle.

No. 635. ORDER THEREON, 30th May 1862, No. 1,210.

The Estimate, Rupees 2,550, forwarded with the above Endorsement is sanctioned, and the amount will be placed at the disposal of the Acting District Engineer from the Reserve Fund of 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 636. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Madras Engineers, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Madras, 24th May 1862, No. 3:—

SIR,

With reference to the accompanying copy of a demi-Official communication from the late Secretary to the Government of India, Public Works Department, Colonel Yule, I have the honor to request the permission of Government to have the Notes which I have drawn upon the Soane Project printed at the Government Press for transmission to the Government of India.

DEMI-OFFICIAL.

From Colonel H. YULE, Secretary to the Government of India, D. P. W., to Lieutenant-Colonel F. H. RUNDALL, Madras, dated Calcutta, 28th February 1862.

MY DEAR RUNDALL,

1. When you were in Calcutta I asked you when convenient to favor me with a note on Colonel Dickens' Soane Irrigation scheme from a Madras Delta point of view, especially in relation to that happy characteristic of the Delta Works, the early period in their progress at

which they begin to give a return. This is no doubt aided by the local circumstances, but I am under the impression that Madras experience could be usefully applied to Colonel Dickens' scheme in the direction of reducing the cost, and in any case of reducing the cost incurred *prior* to the commencement of a revenue.

2. The Governor General in Council wishes to obtain such a view, and I am to ask you to give it. You can send it at your convenience, but the earlier the better to my successor here.

(True Copy,)

(Signed) F. H. RUNDALL, Lieut.-Colonel,

No. 637. ORDER THEREON 30th May 1862, No. 1,211.

Ordered accordingly that the Superintendent of the Government Press be requested to have 20 copies of the Notes referred to in this letter printed with as little delay as practicable.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 638. Read the following Endorsement of the Acting Deputy Chief Engineer, Central Circle, dated Chepauk, 27th May 1862, No. 1,064:—

Read the following letter from Lieutenant-Colonel J. CARPENDALE, Principal Civil Engineering College, to the Deputy Chief Engineer, Central Circle, dated Chepauk, 26th May 1862, No. 74.

SIR,

No. 2,295, dated 13th December 1861.

Mr. R. C. Fraser, Probationary Engineer of the 1st Class, was required by Government Order as per margin, to pass an examination in Tamil within six months. He went up for examination the end of March, and failed. The six months given him by Government will expire on the 12th of June, and he has applied to me for a Committee to be assembled prior to that date. It would probably be very inconvenient to assemble a Committee specially for Mr. Fraser, and I accordingly recommend that he may be allowed to appear at the usual quarterly examination, which I understand will take place on or about the 28th proximo.

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1 Letter from the Civil Engineering College, dated 26th May 1862, No. 74.

Submitted[1] to Government with a request that if no objections exist, Mr. R. C. Fraser, Probationary Engineer, 1st Class, may be authorized to attend for examination before the quarterly Committee to assemble on or about the 28th proximo.

(Signed) J. OUCHTERLONY, Lieut.-Colonel,
Acting Deputy Chief Engineer, Central Circle.

No. 639. ORDER THEREON, 30th May 1862, No. 1,212.

Under the circumstances stated, the Government grant authority for Mr. R. C. Fraser, Probationary Engineer, 1st Class, attending the quarterly examination to be held at the close of next month.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 640. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to the Secretary to Government, Public Works Department, dated Chepauk, 28th May 1862, No. 1,086 :—

SIR,

1. I have the honor to report that Captain Farewell, the Executive Engineer of Wellington, having been called upon to furnish information required in the Audit Department of the Central Office relative to the adjustment of the outstanding balances of the expenditure incurred on the works at the Wellington Barracks, that Officer suggests that much time and writing will be saved if he be permitted to attend the Central Office in person with his accounts and one or two of his Office people, and as I fully concur in this suggestion I request permission to call him to the Presidency on this duty.

2. Captain Farewell would not require to be absent from his duty for more than a week or ten days, and for so short a period he informs me he could easily arrange for his work being properly carried on.

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No. 641. ORDER THEREON, 30th May 1862, No. 1,218.

Under the circumstances stated in the foregoing letter, the Governor in Council authorizes Captain Farewell's, the Executive Engineer of Wellington, coming to Madras for the purpose of furnishing the information required by the Audit Department in adjusting the outstanding balances of the expenditure incurred on the works at the Wellington Barracks.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.

No. 642. Read the following letter from Lieutenant-Colonel J. OUCHTERLONY, Acting Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Secretary to Government, Public Works Department, dated Chepauk, 22nd May 1862, No. 839 :—

SIR,

1 Letter from the District Engineer, Presidency, No. 42, dated 3rd May 1862.
1 Plan.
2 Estimates.
2 Specifications.

1. I have the honor to submit for the consideration of Government an estimate, amounting to Rupees 1,519, for hanging punkahs, erecting partitions and doors and putting up weather boarding to one end of the building called the "Dewankhana" at Chepauk, the said end being the portion occupied by the Office Establishment of the Chief Engineer and Secretary to Government.

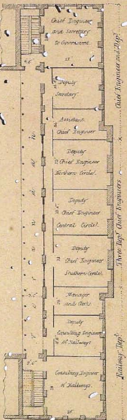
2. As this estimate has been prepared in pursuance of a requisition of the Chief Engineer it will be of little advantage my expressing my dissent from the arrangements proposed.

3. However as I cannot recommend the estimate, while I am bound to submit it to Government, I take upon myself to remark that I think, looking to the changes which are about to take place in the organization of the Public Works Department, and which it is understood will remove altogether from Madras the Offices of the Deputy Chief Engineers of Circles, that the question of adaptation of particular portions of this fine building should be deferred till it can be considered as a whole in relation to the general and permanent use which is to be made of its splendid accommodation.

4. The existing arrangements are not in my opinion the best or the fairest that could have been made. The only Departments which have had due consideration given to them or those of the Chief Engineer and of the Consulting Engineer for Railways; for which the two ends of the building have been taken and the Office employés compactly and comfortably arranged.

The centre portion is given up to the three Deputy Chief Engineer's, the Account and Audit; and what is called the "General Record" Departments; and the Clerks of these are left to make the best arrangement they can. When I first took charge of the Northern Division, I got my Office establishment arranged in what I thought a business-like manner; separated my records from the "General," and prepared for the severance of Departments which was imminent: but all my people were very shortly turned out for the Railway Department, and being thrown into the general assembly of Clerks, Draughtsmen, &c., I gave up the attempt at individuality in despair.

5. I would particularly wish to point out that when the Deputy Chief Engineer's establishments leave the Central Office it will be infinitely too large for that of the Secretary to Government and Chief Engineer, even with the Audit and Account Department, and that of the Consulting Engineer for Railways, which is necessarily but small. It would make an admirable Office for the Board of Revenue with room to spare for other Offices; and indeed with some additions to the upper story and a better arrangement of the ground floor, including the application of speaking tubes, I feel sure it would suffice to accommodate the Board of Revenue and the Chief Engineer and Secretary to Government as well.



6. Great reductions will I feel sure shortly be made in the Central Office Establishment. It will, 'ere long, be seen to be best to give up all but secret work for litho-graphic presses, to private Establishments; both to save the cost of unremunerative labor when there is nothing (useful) for the hands to do, and to encourage this valuable art amongst the community. And the "General Record Department" will soon reduce itself: indeed it would be very advisable before the Central Office is broken up to appoint a Committee to examine the "Records," of which I feel sure two-thirds would be condemned as valueless, and half of the remainder put into magazine as only of possible use for reference.

7. I may add also that as soon as the Deputy Chief Engineers go, the Clerks of the Secretary's Department may all be located on the upper floor where the Deputies now sit. The Railway Department have long since been allowed to have a portion of their Writers up-stairs; and inconvenient as the arrangement is to Officers whose rooms are partitioned off by boarding only 9 feet high, which of course admits of every word uttered being heard all along the wing, it could not of course be pronounced a greater inconvenience to introduce a few more.

8. I enclose a plan of the upper wing, by which Government will be able to judge what accommodation will shortly become available for the Secretary's Department.

Proceedings of the Madras Government, Public Works Department, 1281, 30th May 1862.

No. 643. ORDER THEREON, 30th May 1862, No. 1,214.

1. The Government consider that the weather boards and punkahs provided for in the Estimate submitted with this letter will be found essentially necessary for the comfort of any Establishment that may be located in the building, and they are of opinion that so long as the Office of the Secretary in the Public Works Department continues therein, the screens proposed to be put up are indispensable. They accordingly sanction the Estimate, amounting to Rupees 1,519, to be met from the General Funds of the Presidency District for the current year.

2. The Acting Deputy Chief Engineer, Central Circle, will issue instructions for the immediate execution of the work.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
Secretary to Government.